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The Teaching Of Environmental Education In Basic Secondary Education As A Transversal Project: Living In Harmony With Our Environment

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Summary
The mainstreaming of environmental education in basic secondary education promoted in Colombia through a transversal project is of interest to anyone; indeed, it is a crucial issue in basic secondary education, and in particular, in environmental education. The article develops a project that allows addressing mainstreaming through techniques and strategies applied in the classroom to facilitate its execution, thus contributing to the involvement of students in the community. Projects such as project-based learning, experiential education, concept maps and inquiry learning correspond to the national curriculum, which includes natural and environmental areas, technology and environments, and contribute to guiding teachers and other actors in the process. The current general environmental curriculum sets the guidelines for systematic and transversal environmental training in the Colombian school system.

1. INTRODUCTION

A transversal project is a strategy that integrates scientific, social and historical topics or content in various areas of knowledge. In order to analyse their relevance in basic secondary education, the aforementioned areas are selected and project development and project-based education techniques are used.

The teaching of environmental education in Colombia is traditionally carried out through more global and less centralized projects, and in this way strategies are established to train the teachers who will perform this function; The National Environmental Education Curriculum, for its part, guides that the transversal project can be integrated into the various areas. Finally, the implementation of projects in different localities presents positive developments for the community related to the environment.

2. Theoretical Framework

This opinion paper aims to present some considerations on transversality and environmental education in basic secondary education in Colombia, as well as the importance of developing a transversal project at this level of education, taking as a starting point the National Curriculum of Environmental Education program. From several methodological currents, it is concluded that transversality in education allows the training of students with analytical, argumentative thinking, oriented towards understanding and the ability to provide solutions to common problems. In addition, project-based learning is evident as a fundamental tool for student awareness, for the construction of values and for the acquisition of knowledge related to the environment, which can then be projected to the community. It is suggested that the transversality of environmental education can generate not only benefits in nature, such as more green areas, better waste management, conservation of the environment, but also raise awareness in the community about issues of social interest.

Concepts such as environmental education, basic secondary education and transversality allow the reader to better understand the terms that make up the problem raised; for this reason, a definition is necessary to show the evolution that the country has had in each of them, thus remaking the history of Colombia. This review facilitates the understanding of a transversal project in basic secondary education, conceived from environmental education. To support its relevance, a brief conceptual framework is introduced, which is later linked to an analysis of the importance of environmental education, the national curriculum and cross-cutting projects.

2.1. Key concepts in environmental education

Environmental education is defined as the learning process aimed at imparting knowledge, values, attitudes and experiences in relation to environmental problems, and empowering people to act in the search for solutions and protect the natural environment. It is a process that does not end with formal education, but continues permanently throughout life. In the same vein, it is worth highlighting the approach of Jucker (1991, cited by Novo, 2004, p. 22), for whom environmental education is oriented towards ecology, with explicit mention of the conservation of the earth's resources and the maintenance of ecological processes, and also of human behaviour, the process and management of society. and to their link with the environment. The latter approach includes human, socio-political, economic and value issues; notions of sustainable development; and the need to preserve resources to serve future generations. Therefore, environmental education must free humanity from the burdens of systematicity, prejudices and assumptions; it must help to explore what is possible; it must stimulate critical thinking; he must develop empathy towards others; and it should help choose future actions. The above concepts illustrate the importance given to environmental education to solve current problems.

In Colombia, it began to be officially studied around 1989 through the environmental training law, which defined the bases to guide the process of knowledge and awareness of the population regarding environmental issues. However, the effective implementation of this legislation took place four years later, when the Environmental Training Pilot Project was developed, which managed to benefit 68,000 people through awareness-raising activities. Among the great benefits of the transversal teaching of environmental education, especially in basic secondary education, the possibility of helping to reduce pollution and environmental damage stands out, so that the community has a healthy and safe environment. In addition, people can build a society and culture that is responsible for the management of natural resources.

2.2. History of Environmental Education in Colombia

A review of the previous references that contextualize environmental education in the country is carried out. These references arise to support the proposal of transversality of environmental education in grades 6 to 9 of basic secondary school. Historically, environmental awareness in Colombia was linked to responsibility for the geographical area where one lives. However, for decades, polluting sites were inhabited without activating an awareness of environmental damage.

Today, environmental awareness is the result of constant education and information, and is associated with the protection of nature. From this collective perception arose the proposal for transversal teaching of environmental education. Because preparation to face actions in defense of the natural environment requires constant training from educational institutions, the State must prepare teachers and implement effective strategies that transmit environmental education. The various historical stages of environmental evolution in Colombia, environmental education projects and contributions in this area of knowledge were considered.

3. Importance of Environmental Education

The transversal teaching of environmental education in basic secondary education will allow the community to properly assimilate knowledge, reaching a level of effective and conscious training on the preservation of the planet. The lack of knowledge and lack of awareness about environmental problems lead to a progressive deterioration of an anti-disciplinary nature for the human species;

Environmental learning must have an impact on thinking and on the internalization of specific values and skills to inform and transform, with a view to sustainable development.

Since its origin in Colombia, environmental education has been linked to environmental management; Transversality in teaching activities reduces pollution, improves the natural environment of the sector of influence and encourages the participation of the educational community. Environmental training contributes to strengthening the humanistic base of students, teachers and administrators of educational institutions, as well as other members of the educational community.

3.1. Community Benefits

Environmental education is obvious, because the benefits are presented for both rural and urban areas. In the countryside, communities receive help to improve agricultural production gradually and naturally, while in the cities the health of the inhabitants is closely linked to what happens in these areas. In this way, by maintaining the balance in agriculture, cities are protected, since, if aspects such as forest reserves, the adequacy of water, forests, rivers, air and even snow are not controlled and maintained, the quality of life in urban centers deteriorates. Therefore, although environmental education has the environment as its main focus, its fruits extend to all sectors, providing multiple benefits.

The particular characteristics of environmental education are also reflected in the methods used. For example, general education adopts a theoretical orientation, but environmental education is based on project-based learning, experiential education and fieldwork. Thanks to these methods, one can feel nature, recognize its importance, relate to it, and finally understand why humanity must conserve it.

3.2. Impact on Sustainability

Defining concepts is a preliminary task to assess their impact on environmental education. It teaches the interrelationship between man and the environment, helping him to realize the global situation of the current panorama, so that his previous action does not accentuate the damage. Thus, learning concludes with the formation of sustainable communities that promote the conscious use of all their capacities: responsible men with humanity, capable of contributing with new forms and resources to improve living conditions, who awaken the value of nature and formulate alternatives for their subsistence, without affecting the ecosystem. Since 1998, the CIDE (Inter-Institutional Committee for the Development of Environmental Education) has established transversality in education in Colombia, integrating its own concepts and categories, and integrating the environment into all areas of training.

Promoting sustained development that allows current needs to be met without compromising the opportunity of future generations is the essence of environmental education. Teaching projects ensure that man coordinates his implantation process, adapting them to the concept of social unity with permanent stability and balance. In Colombia, a megadiverse country, there is still no fully developed national environmental education plan, which limits its special and transversal teaching. In contrast, curricular transversality provides an efficient means to interpret it both formally and informally, by detecting alternatives to dimension postulates of sustainability in various practices, raising awareness for a better use and conservation of the environment.

4. Teaching Methodologies

The transversality of environmental education in basic secondary education can be addressed, among other ways, from the teaching techniques, which guide the learning methods of the students. One of them is project-based learning, which places students in a problem that they must solve, putting their previous knowledge in context and promoting argumentation, co-authorship of knowledge and development of critical thinking. There are also the methodologies of experiential education and service-learning. Experiential education is derived from a cycle of experience, reflection, conceptualization, and experimentation. Service-learning proposes that students carry out actions or activities with social, community or environmental benefit, from each of their learning cycles.

The national environmental education curriculum for basic secondary education must be transversal to all disciplinary areas and to the development of links and environments, and oriented so that students acquire an environmental culture, according to the characteristics and needs of the community and the environmental and territorial contexts. Transversality is implemented through teacher training, the design of curricular proposals, pages and digital material. Finally, environmental education is presented as a cross-cutting project, with the aim of protecting the relationship that exists between human beings and the environment.

4.1. Project-Based Learning

Project-based learning (PBL) is a teaching and learning technique in which students and teachers work side by side to reach conclusions or even solutions to problems. These are activities that generate high enthusiasm and interest, generally working on cross-cutting issues: in our case, environmental education. Within PBL, students plan, implement, and evaluate a project that contributes to the development of some regions through environmental care. The method allows learning about environmental issues not to remain pure theory, but to be used to improve life on the planet, connecting the community dimension and that of the individual; the former is responsible for ensuring that all sectors of their community can enjoy integral well-being, while the latter acts in a respectful and empathetic manner towards themselves and all other living beings.

In basic secondary education, where certain tools for analysis, argumentation and decision-making are already available, the activities of PBL, although transversal to all areas and subjects, will be more defined through the transversal curriculum of Environmental Education; This serves for teachers to develop their guidelines, consolidate concepts and establish the topics and strategies under which students will be evaluated over several years. The training of teachers and the adequate preparation of materials make it possible that, not only in the area or subject of Natural Sciences, but also in a second language and in Mathematics classes, transversal techniques of environmental education can be applied.

4.2. Experiential Education

Among these teaching methodologies, experiential education seeks for the student to acquire knowledge and skills through practical participation (Mera Vera, 2022). It is proposed not only that knowledge remains at a theoretical level, but that it is permanent and useful throughout life. Hence, teaching is carried out through activities either inside or outside the student's environment. Environmental education under this process is achieved because the student establishes a direct interaction with the environment, facilitating the acquisition of values that will allow the formation of a conscious and sustainable inhabitant.

This knowledge can be used to guide the people who live in the community to develop activities that help to preserve the environment in an adequate state. The development of this process can be carried out by applying the same techniques of project-based learning, complementing them with visits to the student's environment in order to live a direct experience, which in addition to generating awareness, will facilitate substantial knowledge of the description of the local ecosystem.

5. National Environmental Education Curriculum

Environmental education in Colombia has received special and transversal attention for many years. Its main guidelines are described below, as well as some suggestions for its application within the disciplinary areas. A cross-cutting project ensures that environmental education is part of basic secondary education and that it is oriented along the lines defined in the national curriculum of basic secondary education in Colombia. The teacher also requires training in the application of these guidelines and must have didactic material that supports the teaching. In addition, some works of projects executed in Colombian cities that have had environmental education as their axis are presented. Likewise, some challenges that prevent progress in this area are addressed, along with the public policies that support the national curriculum and end with an opinion on the subject. Environmental education, understood as the process that allows us to understand the complexity and fragility of the environment, as well as the relationships between life. The teaching-learning processes in environmental education seek to create awareness about the natural resources of the

environment, inspire attitudes of respect for the environment, promote conscious care of nature and develop actions aimed at preserving ecosystems. It also involves the acquisition of knowledge accompanied by experience, so that the student can identify ecological problems associated with nature, food and pollution.

5.1. Guidelines of the Ministry of Education

In order to deepen the transversal teaching of environmental education in Colombia, it is necessary to analyze the aspects established by the Ministry of Education. Curriculum Mainstreaming is defined as a process by which teachers reorganize teaching during the development of a disciplinary area, in order to relate the environmental issue to others that are part of the curriculum. Okuhara (2002, p. 57) argues that the strategy is called transversal environmental education when minimum aspects defined in the national curriculum or socializing in the various areas are developed, or when environmental education content is integrated into the guidelines for teachers in all subjects and courses.

According to the Ministry of Education (2006, p. 37), in order for environmental education to be considered a cross-cutting issue in the curriculum, a frame of reference must be established in basic education within the curricular guidelines for each area, such as: Natural Sciences —basic aspects of knowledge about the subject and ecological concepts—; Social Sciences —historical and social contexts that demonstrate the relationships between population growth and development and impacts on the environment—; Language – promotion of reading and comprehension of texts on environmental education topics to learn about the problems that affect the planet and the importance of citizen participation – and Mathematics, which integrate content to calculate distances and surfaces that delineate the area of countries affected by transboundary environmental phenomena. In addition to the guidelines for the development of projects that involve the articulation of the different contents.

5.2. Integration in Different Areas of Knowledge

The national environmental education curriculum in Colombia proposes an integrated education for sustainable development, through which knowledge and understanding of nature, its risks and life systems concerning Colombian society is promoted. The curriculum also establishes that environmental education must be transversal to all areas of knowledge, given the environmental deformations that affect the functional balances of the various ecosystems. For this reason, the environmental area must be part of the planned work and therefore, among other things, various methodologies must be applied for its teaching, such as problem-based teaching-learning (EABP), experiential-experiential environmental education and project-based work orientations.

The transversality of environmental education requires that both teachers and students know, from theory, the conceptual elements of the subject so that they can approach the practice with meaning and depth. When teaching and learning is experiential, it could be understood that the student must detach himself from theory to focus only on practice or, on the contrary, that theory must be applied. Despite the transversality of environmental training, which implies that the teacher applies the different aspects of the subject in processes designed to contextualize environmental practice, so that the student understands, interprets and learns to learn from experience, there is still resistance in many formal and detailed teaching processes at the different levels. since it responds to the systems designed for them.

6. Implementation Strategies

For the development of the National Environmental Education Curriculum, strategies and incentives must be designed to support the training of teachers at all educational levels; in addition to exercising teaching actions that, complemented by the construction of comprehensive teaching material, provide an adequate response to the ecological, socioeconomic and cultural components. Through these efforts, it is possible to guide teachers to implement transversal proposals, project-based learning and experiential education.

These techniques are used to promote social and environmental responsibilities. Project-based learning keeps students engaged; Experiential education allows meteorologists, geologists and

engineers to contribute, through citizen proposals. There are also recreational activities to promote teamwork and community commitment, in addition to case studies that offer solutions to real problems and motivate behaviors in society that contribute to mitigating negative impacts.

6.1. Teacher Training

The transversality of Environmental Education in the basic secondary education stage in Colombia allows teachers to integrate it into the different subjects or areas of knowledge. To this end, the necessary training must be carried out so that they have access to the information and understand the reasons that justify its inclusion and the way in which it can be carried out. Transversality implies the active participation of all students in the educational project, from planning to implementation. It is possible to define transversality as the union of two or more aspects in different areas of knowledge, with the intention of finding a different way of approaching the same topic, so that it can be faced from different points of view and through different techniques. For example: Environmental Education can be integrated into the areas of Natural Sciences and Biology, to analyze the biodiversity of a place, or in the area of Spanish, to recognize the problems that the community addresses through different types of text. Regardless of the area in which it is addressed, the application of projects provides opportunities to learn to give answers, and finally solve problems.

6.2. Teaching material

Transversal education is based on a curriculum, just like traditional education, which necessarily implies a prior analysis of its objectives, structure and content, then a program can be determined, with the help of which environmental education can be introduced in a transversal way in the curriculum of the basic secondary school, whose contents are found in the document National Base of Environmental Education. published by the Ministry of the Environment. For the program to give the best results, teacher training is necessary, without neglecting adequate didactic material that encourages both students and teachers. There are various methodologies for transversal environmental teaching, of which project-based learning and experiential education stand out. These allow for flexible and participatory activities, designed to be applied at different times and with different actors.

Classroom projects oriented towards environmental education and environmental management, with characteristics of participation, search, action, analysis and production of knowledge applied to the needs of the environment, are also an effective methodology to awaken interest in environmental issues as a comprehensive experience, which allows not only to consolidate a permanent vision of human activity on nature, but also to but also to contribute to improving the social, economic and cultural conditions of the community. On the other hand, experiential learning emphasizes learning as a process that involves changes in knowledge and skills, in order to transform people and society; To this end, teaching must support doing together with studying, as a resource to mobilize reflective, critical and analytical thinking.

7. Successful Projects in Colombia

The impact of environmental education in overcoming local problems is evident in projects by students from Chía (Cundinamarca) and Villavieja (Huila). In these municipalities, project-based learning facilitated community organizing to respond to natural disasters: First Communion in the Guadalupe ravine south of Chía and a gale in Villavieja. Even without a transversal curriculum, the interest of the students and the accompaniment of committed teachers motivated the execution of both projects, which were significant and enriched the quality of life of their communities.

Colombia has guidelines for the transversality of environmental education that can guide teacher training strategies and the creation of teaching materials. Projects that incorporate efficient techniques and processes, aimed at values of social cohesion and environmental protection, show the benefits and results for the sustainability of the country. However, the lack of dissemination and formal support limits its use and evaluation. Similar situations are repeated in other municipalities, where the interest of students and teachers shows that the transversal condition of environmental education would be a strength for the country.

7.1. Local Initiatives

In recent years, curricular guidelines have been established in Colombia to guide environmental management with an integrated and participatory management approach. At the local level, some municipalities have designed and implemented environmental curriculum proposals, supported by teacher training processes and distribution of teaching materials that facilitate the daily incorporation of environmental education activities in basic secondary education classrooms.

In addition, the importance of higher education institutions in the initial and continuous training of educators with competencies to manage the implementation of the environmental education curriculum is recognized. Environmental teaching and learning methodologies have been developed and adopted, taking advantage of experiential processes and other pedagogical strategies.

In localities such as the municipality of Valledupar (Cesar), projects in the area of Basic Community Training have been recognized, whose results have improved the environmental quality and quality of life of the community; these projects have served as a starting point for the Simulation of Language Models (SML), evidencing the value of education.

8. Challenges in Environmental Education

Environmental education is a subject with great potential to contribute to sustainable development, however, in most countries there is little concern for our planet and the lack of education about the environment itself. In Colombia, despite the talks, academic communications and some projects carried out for Colombians to change their perspective on the importance of taking care of the environment, many people still maintain an egocentric conception. Therefore, it is necessary to promote environmental education at all educational levels. In particular, basic secondary education in Colombia should give it the relevance that a cross-cutting issue deserves, because if young people begin to be educated by focusing their attention on the environment, the adoption of responsible behaviors for the protection of the planet will be more effective.

The transversality of environmental education makes it possible for environmental problems to be addressed from different perspectives, complementing the areas that define the curricular structure. In addition, the natural restlessness of the students is taken advantage of, since the issue of the environment is adapted to each local and community reality. This contributes to developing in students the collective conscience, which must not only be learned at home, but must be internalized in people in such a way that children become agents of change for the new generations. However, transversality presents some challenges. Traditionally, each subject has its own evaluated and graded objectives, but environmental education addresses problems of various kinds that simultaneously affect different dimensions of the human being. At the same time, the complex identification and eventual selection and prioritization of environmental issues contribute to the separation and lack of integration of the national environmental education curriculum and the lack of strategies to prepare teachers in the application of these approaches through different projects.

8.1. Lack of Resources

Formal and non-formal education in most NGOs, companies and groups of waste pickers is carried out under conditions of extreme poverty and need that disassociate the educational and training act from the true meaning of it, which are the search for and construction of knowledge. Their limitations in sustaining educational and training processes are greater than those of companies that are characterized by being for-profit, because when formal and non-formal education depend entirely on the resources of the State to administer it, they become superficial and do not contemplate a real interest in sustaining educational and training processes. It is these conditions, added to the multiple factors of the affected social context, that have an impact on the low presentation and execution of projects related to educational and training activities.

But socio-environmental problems are present in all activities, making it necessary to develop real commitments that contribute to the improvement and understanding of the environment for sustainable development. Society is increasingly aware of the importance of protecting water resources and their geographical features. The poor coverage, quality and quality of the educational

service while in others they generate a reflective process where environmental education becomes an incentive and the engine of change. The development of projects framed in the LAC agreements must take into account strategic and cultural aspects and the well-being of the individuals themselves, which includes the quality and safety of the formal food that can be consumed.

9. Public Policies and Environmental Education

Public policies constitute the set of decisions and measures adopted by the State to affect the life of the community and achieve development that is not only harmonious, but also guided towards an adequate quality of life. They are norms and actions aimed at controlling the complex social relations that trigger economic, social, political, educational processes, among others. As such, public policies have as their references security, work, education, culture, public health, medical services, recreation and biological diversity. Hence, environmental education is an essential component, since it seeks to improve the quality of life and grant human beings conditions of dignity to fully develop their potential.

Hence, environmental education is being developed at the global and local levels, to form citizens aware of environmental realities and problems. However, the theory proposed in the matter does not guarantee its optimal implementation due to limitations such as the scarce preparation of teachers to assume the transversality affected by a reduction in material and budgetary resources, testimonies of this difficulty are those already referred to by Montoya and Medina; also, the frequency and intensity with which teachers, trained in the National Environmental Education Curriculum, use projects in disciplinary areas for their teaching. Addressing these issues should be on the agenda of public education policies, as well as in teacher training curricula, constituting a possible solution to these limitations.

9.1. Current Regulations

The new Ten-Year Education Plan of Colombia, prepared and adopted since June 2016, is in force, which guides the development of national education in the next ten years; it takes up the Education Sector Plan 2015–2018 – the pillars for a happy country and sustainable human development – the Colombia Vision 2034, and the National Development Plan and the Sustainable Development Goals, establishing new foundations for a cross-cutting project with an environmental perspective. Its clear determinations in environmental matters will make it possible for the planet to have future generations with an environment similar to the current one.

Environmental Education must be taught in basic secondary education in a transversal way, since the problem facing the world is environmental, so the objective of this subject is the construction of citizens committed to their environment and who, through the environmental sphere, can project and positively transform the environment where they are inserted. in principle the one close to the place where it lives. Nowadays, these bases must be established in the School so that society in general can apply them.

9.2. Role of the State

Natural and human processes generate a great environmental impact that affects the quality of life and survival of those individuals who inhabit the planet. Due to these effects, environmental public policies take into account social and environmental needs to establish a procedure that minimizes the associated risks. Education, considered a fundamental right, must be oriented towards integral development and overcoming the poverty generated by social inequalities; it must be recognized as a universal and irrevocable right that facilitates the construction, transformation, development and social peace.

Public Policies on Environmental Education in Colombia must be expressed in a strategic work plan that involves all competent entities and society in general in order to integrate environmental aspects into educational processes. In addition, strategic guidelines must be taken into account to transform the educational community by providing knowledge related to the valuation and conservation of the environment, optimizing teaching resources to promote the teaching of environmental education

and implementing active, creative and participatory methodologies so that learning is meaningful in students.

10. Future Prospects

When analyzing the perspectives around environmental education, it is convenient to focus on emerging approaches worldwide, especially those related to its implementation in Colombia, and the resources that make its practice more viable. There is an inexorable appetite for knowledge. Currently, it is possible to visit other places through virtual reality, in 2D or 3D, without making the globe cheaper. More than one human being has put on special glasses and has traveled parallel worlds for several minutes. This idea impacts environmental education; It allows you to visit species, habitats, pulse analogous planets and better understand the reason for a world in permanent transformation.

Argentina is among the countries that incorporate virtual reality into the curriculum, using computers or mobile devices. In them, the DearVR project (Education at a Distance Project: Analytical and Immersive Virtual Reality) is also managed at the National University of Quilmes. The development of these technologies has continued since 2012 and is still in force, applying suggestions from teachers and students.

10.1. Global Trends

One of the focal points of discussions in environmental education around the world refers to the new approaches that allow, with greater relevance, environmental education to support the future contributions of students through a community exploration of the national culture, representation of adventure, exploration, negotiation and gestures of bangsa. Indeed, ecological awareness and knowledge of biodiversity are uncertain and unrelated to the future of students. Some authors allow a project-based approach to learning to embrace a concept of a learning environment that means learning is fun, project-based, and closely related to local culture and knowledge." It should not be forgotten that, on the one hand, the interest of environmental education is the way in which students appreciate, feel and are aware of the surrounding environments and ecosystems. On the other hand, the main central concepts and knowledge of biodiversity are sought. On the other side of the discussion are methods to address and improve environmental education.

In response to these requests, the project develops the simplicity to produce an experience-based environmental education learning environment (embodied where students walk) along with the representation of the local culture of an exploration-based learning environment (guided and suggested). These four properties reach the basic level of knowledge and interest of students, situated in a national-level culture. Finally, the concept of environmental education in basic secondary education in Colombia is investigated from a methodological point of view to publicize the importance and benefits of a transversal project oriented to the learning of the central concepts, representation and culture during this educational level.

10.2. Technological Innovations

Information and communication technologies (ICTs) in education facilitate research, search and selection of information, and enable the performance of various activities that complement the student's instruction. Access to information feeds knowledge and awakens curiosity; in addition, ICT facilitates the creation, evaluation and monitoring of group projects. The use of mobile devices provides students with experience in finding and using information, while also ensuring the security and privacy of their online data.

Perhaps the closest and most familiar technological tool for students is the use of algorithms and code to simulate processes and phenomena of nature. The Computational Thinking subject contributes to the development of algorithms that provide learning experiences for environmental education.

11. CONCLUSION

Transversal environmental education in basic secondary education contributes to the formation of consciences capable of making differentiated decisions to seek the sustainability of the biosphere. Awareness and reflection on environmental problems lead students from their daily reality to the search for valid solutions for each context. The country will benefit in several areas if environmental education is developed transversally in basic secondary education, since its citizens will be able to mitigate the environmental damage generated by human actions. The development of various methodologies based on collaborative learning, project-based learning and experiential education, the transversality of the in-depth national environmental education curriculum and the implementation of public policies in this area will make it possible to fulfill the importance of environmental education.

It is sought that Colombian public education at no time neglects the implementation of a transversal environmental education, vital for the presentation of a relevant public education in the country. It is possible to generate awareness from environmental education that allows the environmental problem to be consciously managed at its root, through principles, concepts, data, attitudes and actions that make it possible to solve environmental inconsistencies.

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