

<div><div><div>International Meetings and Journals Research Association</div><div>ISSN: 2791-1226 / e-ISSN: 2790-0277</div><div>Established: 2020</div></div><div><div>Science, Education and Innovations</div><div>in the Context of Modern Problems</div></div><div><div>Editor-in-Chief: Chair of the Editorial Board: Dr. Huda Haggag</div><div>Monthly Regular Open Access</div><div>October 2025 Issue 33, Vol. 9</div></div><div><div>imcra-az.org</div></div></div>	<div>Science, Education and Innovations in the Context of Modern Problems</div> <div>Issue 1, Vol. 9, 2026</div> <div>RESEARCH ARTICLE</div> <div><div>The reality of environmental education in the educational process</div></div>
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<div>Issue web link</div>	<div>https://imcra-az.org/archive/389-science-education-and-innovations-in-the-context-of-modern-problems-issue-1-vol-9-2026.html</div>
<div>Keywords</div>	<div>environmental education, curriculum, environmental problems.</div>
<div>Abstract</div> <div>The study aims to identify the reality of addressing environmental education in the curricula, as it is an important and essential element in comprehensive and sustainable education to prepare the individual to adapt to his environment and solve its problems, so it must contribute to directing educational systems towards more realistic effectiveness, and achieving greater interaction between the natural and human environment, and the resulting social interaction in order to improve the quality of life of the learner and human societies in general. Because of the importance of the reform role played by the school in solving environmental problems, environmental issues have been included in educational curricula of all kinds to carry out its tasks based on the existence of a curriculum and a plan with clear objectives. In light of the continuous increase in the importance of inter-education, it has become necessary to stop in front of it to extrapolate it among the educational institutions is an urgent matter called for by environmental risks, which gain their value from the logic of awareness of experience and its correlation and commitment to expressing certain environmental issues, and employing them in the present future.</div>	
<div>Citation</div> <div>Dib F; Ziada K. (2026). The reality of environmental education in the educational. <i>Science, Education and Innovations in the Context of Modern Problems</i>, 9(1), 749-756. https://doi.org/10.56334/sei/9.1.66</div>	
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<div>Received: 25.04.2025</div>	<div>Accepted: 24.11.2025</div> <div>Published: -5.01.2026 (available online)</div>

Introduction:

Algeria has given importance to environmental education in education, and this was evident through the amendments and reforms made by the educational system, where topics related to the environment were integrated into the subjects studied and some activities were included to support these subjects.

1-The concept of environmental education:

It is one of the most important means that man resorts to in an attempt to preserve the environment, because human societies throughout the ages have had the primary goal of preserving their survival on earth, and therefore

environmental education is a human process that is human, and then its objectives and methods are derived from the society in which they exist and express it¹.

The University of Northern Illinois (USA) defines environmental education as a type of education aimed at knowing values, clarifying concepts and developing the skills necessary to understand and appreciate the relationships between man, his culture and his biophysical environment. It also means practicing decision-making and developing a code of conduct on matters related to environmental quality.

It is a process of reorienting and linking the various branches of knowledge and educational experiences, facilitating the integrated perception of problems and allowing rational actions to be taken to share the responsibility of avoiding environmental problems and improving the quality of the environment².

2- Theoretical approach to environmental education:

2-1- Functional constructivism: As a theoretical approach, it is based on a systematic conception of society, where the environment is a system whose function is to provide the basic elements of life formed by the balance between living and non-living components, and between functional relationships among living creatures, and between nature and its performance of these functions within a set of functional necessities that must be done in the environment and adapt to it and for it, in order to continue giving and not threaten its continuity and balance. It seeks to maintain the social lifestyle through common cognitive trends and the distribution of roles and adaptation to the environment through standards and controls governing behavior, socialization, achieving the goals of society and the existence of social integration.

Talcott Parsons has referred to the study of different social systems and systems, including the educational system, where he sought to analyze the functional roles of the school, especially the process of transforming pupils and their roles into the roles of adult individuals in the future, developing their abilities to face these roles, allocating pupils and dividing them within classrooms, preparing them for occupations and social professional jobs, and other functions carried out by the school by paying attention to the curriculum and curricula devoted to preparing and qualifying pupils.

He also analyzed the functions and different roles of the school and the educational system by paying attention to the curriculum and curricula, using his famous theory of social pattern and action. This is what he clearly pointed out when he defined the process of achieving the public functions of the school and acquiring the social roles of students, especially since the school or school environment is considered a way to acquire individual and family values and their transition to the acquisition of societal and global values³.

Through the ideas contained in his theory, the environment is considered a system that seeks to achieve a state of balance through the harmonious interactions that occur by the actors through the functions of adaptation, achieving the goal, integration and maintaining the pattern that the system does without harmful attrition. Environmental problems such as industrialization and technological progress, distribution and consumption processes represent the functional imbalance that the system loses its balance and stability, and consumes part of its resources to restore the balance that requires the individual to modify himself and his ways of life, as he finds a place in the social environment by improving ways of dealing with things, making changes in social systems, in the system of values, principles of ethics, education, and reorganizing society through the performance of roles, which we call adaptation. Therefore, functional education is required to prepare and establish the individual to perform the roles expected of him to serve the public function and the social structure itself⁴.

2-2- Cultural approach: Focus on the study of the school as a cultural and social system that is linked to the rest of the other social and cultural systems and institutions. Therefore, the school must be studied in the light of its mutual relationship with the external cultural and social environment in order to identify the nature of these relationships and the extent of the impact of this external environment on the change and modernization of the internal cultural manifestations of schools. On the other hand, this approach focuses on the study of some internal cultural and social manifestations that reflect the reality of the cultural environment whose manifestations and consequences vary on both the daily life of students and school teaching staff⁵.

2-3- Environmental income pain: It is one of the main approaches used in the study of curricula, so it takes the environment as a basis for organizing the experiences of the curriculum, so its topics are based on the environment in which students live, and in order for the environment to know its issues and problems, it aims to give a measure of information, knowledge, skills and trends.

The environmental approach is based on the assumption that the environment is the focus of the curricula, as the problem of learners' interaction with their environment is very serious, due to lack of awareness of the dimensions and content of this interaction, which negatively affects the achievement of the basic function of education and preparing the learner to interact with their environment. Therefore, many international and local conferences have recommended the need to make the environment the focus of the entire curricula in a way that helps learners interact with their environment and adapt to it⁶.

The environmental input also has a number of characteristics that can be summarized as follows:

- The environmental approach provides the learner with the opportunity to have direct contact with the environment, which contributes to the formation of a strong emotion between the learner and his environment in which he lives, then identifying its problems, identifying their causes, thinking about solving them and how to work on following their dangers.
- Helps to maintain the impact of learning and the possibility of benefiting from it in other educational situations.
- Paying attention to the good upbringing and education of the learner in a sound environment.
- Highlighting the importance of forming attitudes and values that govern human behavior towards his environment, as it provides opportunities for learners to work together, then they develop a spirit of collaborative teamwork, a spirit of participation, taking responsibility, raising his tendencies and interests towards the environment and gaining appreciation in order to work to maintain and preserve it⁷.
- Organizing curricula according to the environmental approach eliminates the gap between what these learners learn and the actual reality, where the environment is an applied field for the theoretical study they receive in school.
- The environmental approach allows vertical and horizontal interconnection of life experiences and environmental activities included in the content of the curriculum⁸.

3- Interactive Relational Educational Processes for Environmental Education:

The relational interactive process is the focus of the activity and interaction of socio-educational groups in intermediate education institutions, as it is based on a number of basic elements such as the human element, which refers to the teacher, the student, the administration, the educational method used in teaching, content and evaluation, as well as situations in which this process occurs, whether inside or outside the classroom, in the midst of environmental clubs⁹. UNESCO has raised the slogan of environmental education for all because the study of the environment deserves recognition, as it is the permanent coordinator of all curricula to activate environmental education as a process that educational systems seek to develop among individuals, and to include it in the regular education curricula prepared for the upbringing of the generation at a certain stage of its life, according to a plan designed to achieve the desired goals within a pre-planned educational policy in response to ecological considerations, the most prominent of which are those who advocate for the preservation of the environment since the 1970s to ensure sustainable development that cannot be achieved without strengthening and defining educational curricula in accordance with the objectives of environmental education in educational curricula and various strategies and organization plans in the inclusion of environmental problems and concepts, as well as their fields of application in educational curricula, study programs and fields of classroom activities¹⁰.

For the learner to acquire knowledge, values, skills and attitudes to understand the relationship between man and the environment, develop awareness of it, take individual and collective responsibility for solving contemporary problems, work to prevent their re-emergence and make constructive decisions about protecting the environment. They are education and upbringing of the environment and the environment and for the environment, starting from reality and its importance, because the most important step in the level of educational practices with ecological developments can be centered within the new global trend of sustainable development in the concept of capacity building and the formation of the human element required to achieve it.

As for integration, it is concerned with regulating the horizontal relationship between the different aspects of learning, which can be included in the different curricula in similar classes in a way that helps the learner to absorb these aspects comprehensively and consistently, such as the need for coordination and integration between the means and methods by which the different curricula can contribute to the development and acquisition of certain attitudes among learners towards the environment in which they live, as these trends are aspects related to the overall behavior of the learner¹¹, by placing the components of the educational process of goals, content, methods, educational materials, activities and evaluation within the strategies aimed at integrating environmental education into the regular education system, with the need for the administrative and technical bodies charged with planning education at the local, national and regional levels to make increased efforts to analyze national and local needs, determine the nature of public education activities and the necessary training and strengthen human resources, so that education can better take into account the environmental characteristics of each country by presenting the components of the educational process of the environmental education system¹².

4- Methods and strategies of school environmental education:

4-1- Entrances to achieving environmental education in the stages of education:

-Integrative approach: Environmental education topics are included in the various curricula of the subjects whenever possible within the framework of the integrative approach. Some environmental information is included in the study materials. For example, the topic of forests can be addressed in the study of plants in geography when studying rivers

and water bodies and the study of air pollution when studying the atmosphere and its components of gases in the subject of geography. Natural materials can be addressed in science, Arabic language and geography, and this leads to the integration of topics¹³.

-The method of study units: A chapter or unit on the environment can be prepared and introduced into one of the study subjects, so that it is studied in a specific period of time in all its social, economic and natural aspects. This method takes many programs(subjects) such as geography and science. The unit of the demographic problem can be introduced into the subject of geography, and a chapter on energy and its problems can be introduced in the reading book, or a unit on the environment in the book of science or social subjects.

This entry shows the principle of the integration of experience and the inclusiveness of knowledge towards the environment, which are two of the main objectives that environmental education seeks to achieve¹⁴.

- Independent Introduction: It includes the teaching of environmental education as an independent subject like any other subject such as mathematics, history and geography...Etc., This type is characterized by deepening the study of the subject and dealing with it in all its aspects as it allows covering all aspects¹⁵, but this approach faces some difficulties in the fact that the content of environmental education is derived from several overlapping sciences, in the sense that the concept of environmental education is a complex concept in which principles, concepts and skills are involved and its components are derived from various sciences, and the allocation of an independent subject to it can turn it into a conservation material, and this is not a goal of environmental education, but the main goal in discovering the overlapping relations between man and the environment and the interlocking relations and environmental problems to help man make appropriate decisions to preserve the environment.

4-2- Strategies and methods of teaching environmental education in the school:

-Direct experience strategy or field visits and educational trips: It is one of the important ways to achieve environmental education, as it gives the learner the opportunity to interact and direct contact with the environment, increasing his understanding of it. It also allows him to regularly observe the elements of the environment and the mutual impact between them and individuals, helping them to form a holistic perception of environmental problems, as a result of which he analyzes, extrapolates, and draws conclusions that contribute to solving these problems. Direct experience can include sites in the natural environment such as the seashore, a mountainous or desert area, a natural reserve, a water distillation plant, a food canning plant or a purification plant for contaminated water.

This method is of great importance in environmental education as it develops teamwork among learners and is valid for all stages of education.

-The strategy of procedural research and scientific studies: Students are assigned to conduct research on the environment that makes them active participants in the exciting issues related to it, by collecting information, organizing it, analyzing it and drawing the necessary conclusions, and it is possible to benefit from field visits and linking them to scientific research on many environmental issues, such as industry problems, choosing a specific institution or factory, collecting information about it, coming up with the pros and cons of the factory, and making their recommendations in light of that.

Both the direct experience strategy and the strategy of procedural research and scientific studies contribute to the development of scientific thinking skills from accurate observation and data collection, classification and classification, and then the development of laws or general provisions, as well as the development of manual skills such as the use of devices, collection and preservation of samples, and works to give opportunities for collaborative teamwork¹⁶.

- Stories: They help to arouse the element of suspense among students and attract their attention, so this can be used to teach and promote correct environmental ethics. This method is often used with preschool children or in the early years of primary education, as these stories can include attitudes about the lives of scientists and pioneers of environmental movements and what they have done for the environment and the protection of its elements.

The storytelling style has a great role in developing environmental awareness among learners, as it depends primarily on the teacher and his skills in the way of storytelling and his techniques.

- Play strategy, simulation and role-playing: Educational research has proven that social learning does not take place through direct experiences only, but can be done through role-play and simulation, where a group of students, for example, assume the role of characters of conflicting interests about a specific environmental problem, and distribute roles among them and represent these roles and then evaluate and determine the consequences and results.

This strategy is also effective in developing the correct environmental behavior for the elementary school child and raises his environmental awareness level¹⁷. There are other strategies that can be followed, such as creating learning environments and situations, using stimuli or illustrations, training in solving environmental problems, the way of thinking and scientific experiments involved in environmental activities, raising fat or brainstorming (using the brain to suggest a solution to a problem) and the strategy of symbolic drawings (caricature).

5-The role of the educational curriculum in environmental education:

The process of environmental education in all multiple life and educational stages has an important and fundamental role in instilling the principles of environmental education, and spreading environmental awareness and environmental

culture in society, which requires its work and implementation in any society that seeks renaissance, development and advancement, but this activity and development will only be in the light of a free and safe society that has sovereignty over all its material and human capabilities, which helps it to give the issue of environmental education and awareness the necessary attention, especially from the concerned and official institutions, benefiting from the experience and expertise of developed and civilized societies and countries in this field.

Therefore, the school occupies an important position in society for the learner, as it reflects the social needs of the environment and tries to provide students with peaceful habits, attitudes and values that achieve environmental protection, preservation and maintenance as well. This depends on the primary role that the curriculum must play, as environmental protection will only begin by protecting students for their school first. This requires a set of daily practices in the school that maintain the cleanliness of the school, maintain and promote its facilities, preserve the environment adjacent to the school from pollution, and contribute to the preservation and maintenance of its elements. In all cases, teaching knowledge, skills and attitudes through the curriculum should be an integrated process, so the school should contribute to providing students with the methods they need in their study of the environment and teach them how to make appropriate decisions about it, by involving teachers and learners together in a process of analysis of the environment in which they live and analyzing the cultural, social and economic trends that affect them and them, through which learners can control the scientific methods of use that they will practice or need in order to improve the nature of the environment in which they live ¹⁸.

6-The role of the school in environmental education:

Education within the educational system, that is, the school, is based on curricula, study plans and various educational activities that require students to pass examinations and monthly, quarterly and annual tests.

According to the instructions of the prevailing educational system, which aims to form personality in accordance with the customs of society and the orientations of the system of government.

This educational role is performed by teachers who are qualified and prepared to achieve the general and specific educational objectives of the school¹⁹.

Everyone has been alerted to the importance of the social and moral reform role played by the school in conceding problems, studying them and proposing appropriate solutions to them. ²⁰ Of the environmental problems, environmental pollution problems, desertification, soil erosion and deforestation...etc.

Some have called for the inclusion of courses on environmental education with all the problems and issues facing the environment in national and international programs, and to emphasize the training of experts and legalization in this field

However, it has become clear that solving problems is not in the hands of specialists alone, and that it is not possible to find radical solutions to environmental problems without making a modification in all fields and stages of education so that it has the ability to positively indicate in educated individuals towards the environment, and thus interest in it becomes part of the behavior of the individual and society in general.

6-1-The role of the teacher in environmental education:

Teachers play a central and multidimensional role in promoting environmental education, serving not only as transmitters of knowledge but also as facilitators of critical thinking, agents of behavioral change, and models of environmentally responsible action. Their role spans curriculum design, classroom pedagogy, and community engagement, forming a holistic approach to environmental learning.

First, teachers act as curriculum mediators, integrating environmental concepts across subjects to help students understand ecological systems, sustainability principles, and human environment relationships. Scholars argue that interdisciplinary integration is essential for addressing complex environmental issues such as climate change, biodiversity loss, and pollution²¹.

Second, teachers function as constructivist facilitators, creating learning experiences that promote inquiry, problem-solving, and hands-on engagement. Practical activities such as field trips, school gardening, and environmental audits encourage students to apply their knowledge in authentic contexts, which strengthens ecological literacy²².

This pedagogical approach aligns with the idea that meaningful learning happens when students actively construct understanding through experience.

Third, teachers serve as behavioral models, demonstrating environmentally responsible practices such as waste reduction, energy conservation, recycling, and responsible consumption. Research shows that students often internalize environmental values when they observe consistent pro-environmental behaviors in their teachers ²³.

Fourth, teachers act as advocates and community connectors, linking classroom learning with community initiatives and environmental organizations. Such collaboration enhances students civic engagement and encourages them to participate in solving real-world environmental problems²⁴.

Through partnerships and participatory projects, teachers promote community-based sustainability learning.

Finally, teachers play a critical role as motivators and value-shapers, fostering environmental ethics, responsibility, and stewardship. By guiding students in discussions on sustainability, equity, and future generations rights, teachers help develop attitudes that support long-term environmental well-being²⁵.

6-2-The role of the textbook(syllabus) in environmental education:

The textbook is an important means in educational processes. It is the container that contains the educational material, which is the tool that enables learners to achieve the objectives of the specified curricula. It has an essential function as it is closely related to the educational curriculum in terms of being the comprehensive basis for the educational opportunities that the learner, with the help of the teacher, should be exposed to, so he takes from it and builds his personality so that he grows in knowledge and knowledge.

Therefore, it is the reference from which the learner derives his knowledge more than other sources, as well as one of the sources that the teacher can consult in preparing the learning material before presenting it to the learners in Section²⁶.

The process of environmental education in all multiple life and educational stages has an important and fundamental role in instilling the principles of environmental education, spreading environmental awareness and environmental culture in society, which requires its work and implementation in any society looking for renaissance, development and advancement, but this activity and development will only be in the light of a free and safe society with sovereignty over all its material and human capabilities, which helps it to give the issue of environmental education and awareness the necessary attention, especially from the concerned and official institutions, benefiting from the experience and expertise of developed and civilized societies and countries in this field.

Therefore, the school occupies an important position in society for the learner, as it reflects the social needs of the environment and tries to provide students with sound habits, attitudes and values that achieve environmental protection, preservation and maintenance as well. This depends on the primary role that the curriculum must play, as environmental protection will only begin by protecting students for their school first, and this requires a set of daily practices in the school, maintaining and advancing its facilities, preserving the environment adjacent to the school from pollution, and contributing to the preservation and maintenance of its elements.

In all cases, teaching knowledge, skills and attitudes through the curriculum should be an integrated process, so the school should contribute to providing students with the methods they need in their environmental studies and teaching them how to make appropriate decisions about them, by involving teachers and learners together in a process of analysis of the environment in which they live, and analyzing cultural, social and economic trends that affect them and in them. Through this, learners can control the scientific methods of use that they will practice or need in order to improve the nature of the environment in which they live²⁷.

Environmental education curricula are the most influential educational elements in building an individual's behavior towards his dealings with the environment. Therefore, many countries have paid attention to these curricula by focusing on the proper selection of environmental concepts appropriate to the ages and mental levels of students, the diversity of environmental activities, and the full use of school resources in environmental education and others.

Environmental education also focused on the early stages of public education, especially in the primary stage, where it is easy to shape the behavior of the child at this stage, and to build positive trends towards increasing his understanding and dealing with his environment.

The introduction of environmental concepts in the curricula does not happen randomly, as is the case in many traditional curricula, where some environmental concepts are studied through the teaching of scientific subjects such as science, religion, social sciences, etc. Rather, what is required is to build scientific and environmental curricula within the framework of an integrated strategy that does not depend only on what students should be taught, but also what is required is to focus on how environmental education is taught in the same way as students²⁴, but also what is required is to focus on how environmental education is taught in a way that educates, teaches, instills values, knowledge, science and promotes optimal behavior in the souls of young people²⁸.

Naturally, building environmental trends means preparing teachers to be able and aware of how to teach science, meetings, languages, civic education, or others, by coloring the concepts of these fields of study with environmental concepts. A science teacher cannot teach environmental concepts if he no longer does so, as is the case for the teacher of other subjects.

Conclusion:

Algeria has given importance to environmental education in education, and this was evident through the amendments and reforms made by the educational system, where topics related to the environment were integrated into the school subjects and some activities were included to support these subjects, which contribute to the formation of a generation that is aware and interested in the environment and the problems associated with it, and has the knowledge, mental abilities and sense of commitment that allows it to practice individually and collectively solving problems related to the environment.

Ethical Considerations

This study was conducted in accordance with ethical standards applicable to educational and social science research. The research relies on curriculum analysis, document review, and theoretical examination of environmental education practices within educational institutions. No human participants were directly involved, and no personal, sensitive, or identifiable data were collected or analyzed. The study did not include surveys, interviews, or experimental interventions. Therefore, ethical approval from an institutional review board was not required. The authors ensured academic integrity, objectivity, and respect for institutional and educational contexts throughout the research process.

Author Contributions

- **Pr. Dib Faycal** contributed to the conceptualization of the study, development of the theoretical framework, analysis of environmental education within curricula, and drafting of the manuscript.
- **Dr. Ziada Kaouthar** contributed to the literature review, methodological structuring, interpretation of findings, and critical revision of the manuscript.

Both authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

Acknowledgements

The authors would like to express their sincere gratitude to **University Constantine 2 Abdelhamid Mehri** and the **Laboratory of Economic Sociology and Social Movements** for providing an academic environment conducive to research and scientific reflection. Appreciation is also extended to colleagues whose discussions and academic insights indirectly supported the development of this study.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently, without financial, institutional, or personal relationships that could influence the objectivity or credibility of the findings.

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