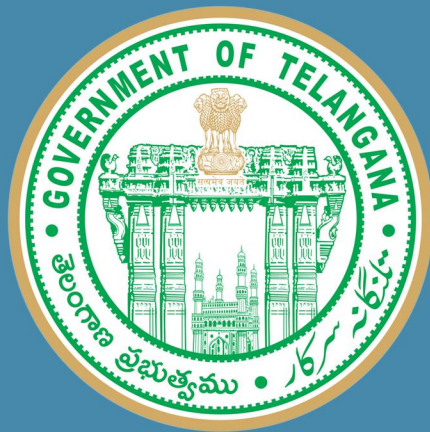


# State Curriculum Framework-2011

*Position Paper*

on

## Habitat and Learning



**School Education Department  
Telangana, Hyderabad.**



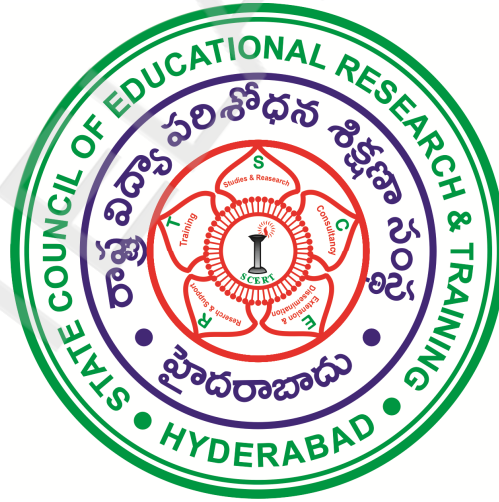
**State Council of Educational Research & Training  
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**State Council of Educational Research & Training,  
Telangana, Hyderabad.**

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Telangana, Hyderabad.

## **Vision of the State**

*The vision of AP is that ALL children should receive high quality education and become responsible citizens with an acute sense of the other. They should be aware of their environment and think about it critically. They should listen carefully and speak fearlessly. They should be able to understand what they hear and read; but they should also be able to question it. Teachers should promote these skills, provide meaningful teaching learning processes in natural and friendly environment that enable children to express themselves freely and ask questions. Teachers are collaborative learners and reflective practitioners. Parents and community should have a sense of ownership and participate in the life of the school. In a world which is becoming increasingly instrumental, materialistic and competitive, school should become a space for reflection, cooperation and promotion of human and ethical values.*

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## ***Executive Summary***

The curriculum renewal exercise in the state of Andhra Pradesh is an opportunity to focus on the issue of Environmental Education which though often advised in the past decades has rarely been effectively implemented. The position paper entitled “Habitat and Learning” has been written in the context of teaching of Environmental Education in school. What is our environment, what constitutes EE and can awareness for the need for sensitivity for our habitat be generated in school? The term Habitat has been used interchangeably with environment and as stated in the NFG position paper it can be used to describe the conditions that permit any species to thrive.

How do we generate the awareness that we effect the environment coupled with the awareness that it affects us? What can be the process of helping the learner get in touch with her habitat? For too long, EE has centred on passing on do’s and don’ts which are memorized but not internalized by the learner. It is necessary therefore to first clarify our objectives before attempting any strategy. One chapter in the position paper is devoted to this.

We are increasingly becoming aware of the degradation of the environment. But how does the teacher contextualize this in her classroom and make the children realize that this phenomenon is not just a global issue but is real for them as well? The various aspects of EE have been enumerated specifically with respect to a diverse and multilingual classroom. The shift from learning about the habitat to learning through it and having the power to influence it are the result of an ever evolving understanding regarding the teaching of EE.

The teachers require support is at multiple levels to be equipped to teach EE. They need to become aware of the importance of EE and hence convinced that it should be a part of the school curriculum. Preparation to use the learner’s background, the local community, help in design of material and activities and assessment exercises is required. In the higher classes, integration of EE with science and social science can be thought of.

The last section of the position paper focuses on assessment procedures that can be employed by the teachers. These have moved away from rote learning to processes that expect the learner to think, analyse and act and the teacher to think of alternative activities, and open ended questions.

Ultimately, the onus of introducing children to EE to children without making them

feel they have been burdened lies on the teacher. It is her understanding of EE that will influence how children perceive it and whether it is transacted in the spirit meant in the position paper. It is strongly recommended that any process towards introducing EE in schools in a formal fashion should be preceded by a syllabus drafting and teacher preparation exercise.

SCERT TELANGANA



## 1. Objectives Of Environmental Education

The Environmental Education (EE) curriculum, 'Habitat and Learning,' is largely a step to enable an understanding of how human beings shape the world they live in, to inculcate in the learners an attitude of responsibility of action that has bearing on their environment, and an attitude of respect towards the diversity of human life and experience. It is aimed at building an understanding around the interdependent relationship between the man-made and natural environment. Considering the current problems of over-use of resources, resource management and resulting issues of socio-economic inequity, and a loss of bio-diversity as a result of expanding human settlement, to state a few, it is a need of the hour for the school curriculum to build among the future citizenry an awareness and sensitivity around environmental challenges, and cultivate an attitude of concern and accountability.

EE has often been seen as enlisting environmental problems without enabling the child to actively engage with and reflect on the physical and social habitat she is part of. In moving away from this, we need to devise a framework that enables a child to build an understanding around the following:

- that there is interdependence of all life on Earth, and there exists a relationship between all living things (including human beings) and their physical environment;
- that human beings are instrumental in shaping their environment;
- that environmental problems exist, often as a result of human activity, and that an understanding of environmental problems can be made by observation, analysis and drawing inferences;
- that they as children are responsible members of a community and can, individually and collectively, shape their environment;
- that there is a great diversity in human life – diversity in the way different communities interact with their physical (natural or man-made) environment;
- that there is a need to keep the environment safe for and to foster concern for all living species.

Bearing this in mind, the following broad objectives of EE can be stated, as has been stated in the NCF 2005 NFG Position Paper on Habitat and Learning (p.4):

- 'to expose students to the real-life world, natural and social, in which they live;
- 'to enable them to analyse, evaluate and draw inferences about problems and concerns related to the environment;
- 'to add, where possible, to our understanding of environmental issues;
- 'to promote positive environmental actions in order to facilitate the move towards sustainable development.'

Can these objectives be achieved by introducing a new subject in the school curriculum or does it require more? The team working on the position paper is aware that caution should be exercised in the introduction of any new subject as irrespective of the attempted reforms in the curriculum and classroom processes, there is still far too much for the child to cope with in terms of the school syllabus. Several aspects of EE such as observation, questioning, analysis can be built into the current structure and indeed theoretically they already are a part. The ultimate objective is to encourage the child to move out of the classroom and explore the world around them.

## **2.Aspects Of An Environmental Education Classroom**

Starting with the Kothari Committee report (1964), the use of environment in the teaching of children has been suggested in nearly all documents pertaining to school education and curriculum. The Supreme Court judgment has recommended the teaching of EE as a compulsory subject in all classes. At the same time, nearly all have recognized that the burden of syllabus placed on the child and there is agreement that introduction of additional subjects should be discouraged. The challenge therefore is to bring in aspects of EE in the current classroom in an integrated manner.

Design of the EE curriculum starts with the admission that the environment of all the children in the state is not the same. Therefore which and whose environment should be considered while defining the guidelines is a major issue. We can at most talk about the vital aspects that should be visible in all EE classroom and enable the teacher to work to achieve them.

### Teacher sensitivity to the diverse backgrounds of the learners:

Teachers will be the key to bringing change in the EE classroom. The question is: who is the EE teacher, and why should they be prepared to be sensitive to their children?

At the primary level, a teacher is expected to teach all subjects whereas from the upper primary level onwards a certain specialization is demanded. Currently, EE is considered to be in the domain of EVS at the primary level and science and social science later. But with our new understanding, teachers irrespective of the subject they teach are required to bring EE into their classroom. The NFG position paper on Habitat and Learning has elucidated in some detail the activities around EE that can be built into different subjects. In a broad sense, all teachers need to be aware of the background of their children.

Teachers' sensitivity towards the individual learner's context and diversity in the classroom, their understanding of how a child can be probed to observe and analyse, and their understanding that we as people constantly interact with and shape our environment, will be pivotal in shaping the nature of EE.

Each individual's habitat is unique. Every individual evolves in a context that is specific to her/him, and it is this context that shapes her/his experiences and opinions.

Since meaningful learning can only take place in the context of one's own experiences, it is crucial for the teacher to be sensitive to the unique habitat or individual context of the learner. Classroom interaction, therefore, would only be meaningful if the teacher takes the child's background and experience into cognizance. It would be important for the teacher to assess the specific features of the learner's environment – the nature of her physical and social environment, the manner in which the learner's family/community relates to the physical environment, and several other aspects of the learner's man made habitat, which may deal with issues such as sanitation, garbage management, pollution, etc.

The teacher needs to empathise with and be sensitive to the needs of diverse children. Activities, worksheets and other materials, too, must be tailored according to the children's diverse backgrounds. This will encourage children to explore and understand their own and their community's role in shaping their habitat.

#### Multicultural / Multilingual classroom as an asset:

It is often a worrisome concern for a teacher to be in a classroom that has children from varying backgrounds who may even speak different languages. But this feature of a classroom can be seen as an asset rather than an obstacle. This is because children with different cultural experience bring different perspectives and opinions which add richness to the quality of classroom interaction.

Linguistic diversity needs to be acknowledged as a key element of cultural diversity. There exists an undeniable link between language and culture. Since languages evolve in and are a crucial part of specific socio-cultural contexts, they contain within themselves the essence of how the speakers understand the world around them. Therefore, a multi-lingual classroom can be a vital resource as it will represent multi-cultural viewpoints. In being exposed to divergent views in a classroom, children have the opportunity to make an assessment of different perspectives on the basis of which they generate their own unique understanding, a process which helps develop their thinking skills. In the context of Environmental Education, for example, a discussion around the manner in which different communities that children belong to use water as a resource, how it is distributed and conserved, may help form a cross-cultural understanding of water management.

It is, therefore, important for the teacher to respect a multi-cultural classroom rather than alienate those children who may speak languages or a language that is different from that spoken by a majority of the class and/or the teacher. Further, the sensitivity that the teacher shows towards a diverse classroom sets an example before the learners for how different cultures need to be respected. Embracing cultural diversity in a multicultural classroom also helps overcome feelings of superiority/inferiority that might exist. In interacting with 'others' from different backgrounds who might speak (a) different language(s), learners become more accepting of cultural differences and become less myopic in understanding the world.

The child will feel more involved if the teacher uses her language for explaining concepts. This will help in concretizing ideas that she is already naturally familiar with. Use of abstract terminology will lead the child to memorize facts without understanding and defeat our purpose of making her more aware of her environment.

Learning about habitat vs. Learning through habitat:

It is crucial that there be active learning by the learner about her environment through the natural and social world around her, i.e. through her habitat. In other words, EE should encourage environment based learning and activity based learning. A shift needs to be made from a teacher-directed 'show and tell' manner, where knowledge about the environment is seen as information that is memorised without questioning or analysis. EE needs to include learning which is participatory and involves problem-solving. Experiments are considered lie in the domain of science teaching but they lose their meaning if reduced to demonstrations by the teacher where children are passive spectators. Children need to learn to draw inferences from the observations rather than confirm results already given to them as facts.

Activities and activity-based project work must be considered an essential part of EE, and should not be carried out routinely as material to be gathered and put together or memorised without probing the analytical skills of the child. Activity-based learning and project work needs to be devised in a manner that it involves parents and the immediate community (governmental, commercial, etc.) where possible, and should enable the child to analyse, evaluate and draw inferences regarding environmental processes and related issues through her observation. Learning about the environment,

therefore, will only be meaningful for the learner if she actively engages with the world around her.

The role of the teacher is crucial as they need to modify activities to make them doable in the context of the child. When asking children to gather flowers and leaves, the names can be changed to include locally available varieties. Rural and urban contexts are widely different. No matter how interested the teacher in a city, she cannot carry out sky gazing activities if the night sky is not visible due to city lights. The idea of learning through the habitat should not end with the use of locally available material.

But should this imply that only the materials and activities in the immediate environment of the child be focused on? It is more important that the materials (or viable alternatives) be easily available and the activities relatable in the lower grades and gradually experiences that are more foreign be introduced.

#### Learning for habitat and the learner's power to influence her habitat:

Teaching of EE involves making the learner consciously aware, interested in and capable of coping with an environment that is already close to her and about which she knows. Conservation of environment, learning about principles governing natural phenomenon or with developing sensitivity to variety in human life and the continuous change in our lives and the lives of societies in general prior to us and apart from us are also included.

Since human beings are instrumental in shaping the environment, it is essential that the EE curriculum be designed in a manner that it enables the child to think in a direction to make her feel accountable for her surroundings. EE often entails the simple enumeration of environmental problems which adds to the bulk and burden of information that has to be memorised by the child. In this way, EE is seen as a subject that deals with the environment almost clinically, from the outside, without assessing one's own role in shaping one's environment. A teacher, therefore, needs to be instrumental as a facilitator in the learning process in enabling children to realise their own and their community's role in shaping their immediate environment. The realisation that they are members of a community and that the choices they make as responsible members of that community have an impact on their habitat needs to be emphasised in the classroom.

Most states include EE as a component of EVS in the primary classes. If we claim that the child is already part of the environment then no additional effort is required in EE. However, certain aspects of EE such as conservation have to be introduced in the classroom. Their treatment will vary depending on the class of the learner. At the same time the learner needs to be aware of their role in influencing the habitat. Habits associated with consumerism and the dangers involved and what role they can play in conservation can be discussed.

While the children can see that nature is the source of food and water, becoming aware that many other products are obtained from nature such as paper from wood or how wasteful habits pollute the environment and deplete resources can be part of EE. Exploitation of nature would affect them eventually.

In the higher grades, they can move away from the immediate environment to more global issues. Currently Niyamgiri Hills in Orissa's Kalahandi district are in the news. Such news items can be used to highlight tribal cultures. Should mining be permitted, under what conditions, have they seen such activities in their area and what they can do in such a situation can be the talking points.

Awareness that they influence the habitat will be instrumental in developing a sense of collective ownership, co-operation and a sense of responsibility and initiative as well as understanding society and its inter-relationships in the processes of development in it. The standard textbooks do not reflect the present concerns being voiced and the debates on issues related to development and environment, including the relationship of human beings to each other and to the natural and physical environment, in a properly thought out manner.

Issues of gender and diversity are also part of EE. Awareness of biases in classroom, in their homes, neighbourhood and media can be the starting points of change. How much work is done in a day by a woman, activities that are traditionally associated with girls, participation of both boys and girls in the activities in class as well as at home, stories about girls expressing the sense of things they want to do, stories/descriptions about societies which have a different status for women can affect a learner's ability and desire to change her habitat.

#### 4. Assessment Procedures

Reforming methods to assess student performance is pivotal to curriculum change. The examination, which generally tests rote-learning, is often a great source of anxiety for the child, and needs to be replaced with a more holistic method of assessment. Assessment of a learner's performance and achievements cannot be made in comparison with other learners, but on evaluating the learner's unique learning curve. It is important that the teacher keep a constant record of the learner's interests, achievements and progress throughout the academic year. Though different assessment strategies and parameters of assessment will need to be devised for different classes, from primary to higher secondary, we can broadly highlight the methods of evaluation that can be used in EE in a meaningful manner.

The written examination, which may include questions like 'Fill in the blanks' or 'Match the following', usually tests rote-learning, and does not urge the child to use his own experience and understanding or be analytical. It is crucial for the examination to probe the child to use his understanding of the content to give his own opinion. For example, 'If you were the Sarpanch/Mayor/Chief Minister, what steps would you take to ...?' 'Do you think it is fair that ...?' Care must be taken in the design of these that the learner has to take a stand and that different learners can have different viewpoints?

For example – A factory is being set up in the vicinity of your village. Will you support or oppose it?

Before deciding on their answer, children should be encouraged to think through and identify factors that will influence their decision. These could be:

What will the factory manufacture? It could be involved in the manufacture of anything from steel to pickles.

Will it provide or take away livelihood?

How will it effect the local environment?

If not here, then where this factory should be set up?

Once they have arrived at some conclusion, some of the factors can be changed and the learner can thus see which factors are more influential than others.



Such questions are open-ended and have no correct or incorrect answers. Teachers will need to be trained both to design and assess written assignments similar to these. In primary classes, written assignments should form a very small component of the overall assessment. They can orally answer questions like : Is there a relationship between cleanliness of the surroundings and illness in the society? Or Do trees help us in our life? What would happen to us if the number of trees were reduced drastically?

In an open-book examination, a pattern of asking questions to which the answers can directly be lifted from the text needs to be broken, and questions must be asked that make the child reflect on her own understanding.

For example, “Should tribes accept the life style and norms of the people of the city” will make them think and question about their own lifestyle. They will also need to gather information about the tribal lifestyle, whether there is one or more and then analyze how it differs from the city life. While information about life of a particular tribe maybe copied from a book, framing the question in this manner will make the child reflect on why they live as they do and her own assumptions?

Another type of open book exam could focus on identifying and stating the reasons for something after comprehending from the paragraph itself or choosing from possibilities given or giving alternative reasons.

Activities, activity-based project work and field studies need to be built into the syllabus and focus shift from being routinely conducted, involving the mere gathering of data, to being participatory, involving, where possible, parents, the community, or governmental, commercial or other agencies, involving observation, analysis, evaluation and inference.

The extent of interaction with the environment during these visits should be gradually deepened to develop graded survey activities. The initial visits can be used for gathering materials and information. The material collection can also be broken into stages with the simplest being simply procuring things as they are available. This could be extended to experimenting during the field trip itself and bringing in materials that need to be dug up or cut out or processed before collection. The development of the ability to seek information from the various functionaries in the environment, for example, the Gram-Sevak, the Doctor, etc. can also be included.

On-going classroom assessment is a significant part of evaluating a learner's interests, achievements and progress. It is aimed to help the teacher form an understanding of the learner's style of learning, how much she has learnt, and how she can apply her learning. Classroom assessment techniques include making learners work in small groups, oral assessment or written tests. Since classroom assessment is an on-going process while the teaching-learning process is still going on, it can help the teacher determine what the learners learnt and what they are unclear about, and using this, teachers can then focus their classrooms on the basis of the needs of the learners.

## 5. Recommendations

The teaching-learning of EE as envisioned in the position paper will require certain changes in the existing system. The following steps are recommended:

- Modification of the existing school curriculum to include aspects of EE either as a separate subject or integrated with the current subjects.
- It has been suggested in the past that in order that EE is included in the text books and teaching, text book writers and curriculum designers should interact with children, teachers and the ordinary schools of the country. It is not enough to give teachers a prepared syllabus and a national text book which they have to adapt for their region. This participation is too limited in scope and too late in the production process and does not include any interaction between the curriculum designers and the teachers. Without this interaction the perspective of the adaptation remains arbitrary and undefined.
- Development of guidelines and material at the state level for the teaching of EE keeping the abovementioned point in mind. This would include a list of suggested activities, aspects to be covered in each class, assessment issues and guidelines for the teacher.
- Preparation and training of the people making the materials wherein the writers tryout the activities and the materials with school children or get teachers to tryout and give feedback. Observations can be carried out during the trial process for modifying and fine-tuning the activities.
- Contextualization of the activities at the district level with the help of the teachers. Training the teachers to locate material, design activities and modify them to the needs of their children.
- Teacher preparation to adapt to a multilingual, diverse classroom and to new methods of student assessment.

The focus of EE in the primary schools should be to preserve and sharpen the curiosity of the learner about her habitat and create opportunities to practice the skills that are necessary for exploring the environment at multiple levels. Messages considered important and essential for children should be introduced around the environmental experience of the child and not as precepts.