

Integrating Environmental Awareness with Academic Subjects

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In a Voluntary Teacher Forum (VTF)ⁱ meeting, a group of primary school teachers from various schools in Puducherry and Resource Persons from the Azim Premji Foundation, Puducherry met to analyse Tamil textbooks. In this discussion, we noticed that the Tamil textbooks of classes IV and V revolved around environment-based themes, like water, seeds and germination, trees, enjoying nature, etc. We categorised the lessons/topics and extended our analysis to other textbooks, like EVS, English and mathematics. We selected the lessons and learning outcomes related to nature, livelihood, health and the possible learning activities that revolved around environmental awareness and language skills. We discussed the lessons and framed lesson plans and activities for the teaching-learning process to comprise experiential learning, sensitivity to nature, and multilingualism.

Planning and focus

Reorganising the lessons

Traditionally, teachers take up lessons in the order that they are given in the textbook. Here, we decided to collate the environment-based lessons together and re-ordered the lessons in this sequence – germination, planting a tree, water bodies, enjoying nature and proverbs based on nature and agriculture.

Designing classroom activities

We designed some common activities, like the germination of seeds and a few others which were location or school-specific. Teachers could pick these depending on their interests and available resources. For example, for the palm tree lesson, class IV students and their homeroom teacher (class teacher) went to see a palm tree. They had a dialogue with the palm tree climbers whose livelihood depends on the tree; attended a palm craft festival showcasing the various parts of the palm tree and food made out of palm.

Integrating lessons and subjects

Since in Puducherry schools, a single teacher teaches all the subjects to a class, the teachers

were easily able to integrate environmental awareness activities with other subjects. The same was true for some language teachers who taught both languages, Tamil and English. Hence, this idea ensured dual language acquisition opportunities in the classrooms.

Inculcating values and aims of education

From the aims of education, we selected the part on sensitivity towards others' feelings and well-being for the classroom discussion. The questions we would ask were: Are we sensitive to nature, soil, water, and air? Are we sensitive towards other species living with us in nature?

Scope for multilingualism

During classroom activities and writing/sharing of experiences and doing exercises, most of the teachers used and connected both languages, Tamil and English.

Classroom plans and activities

The activities were designed to help students experience nature by involving them in various nature-related daily activities, engaging and interacting with the community, and developing reading and writing skills through these experiences. The collated lessons included singing, nature-based field-work and basic language activities. Children involved themselves in the activities independently – planting at home, group seedling, with the community – collecting various information, visiting places - waterbodies, palm craft, etc.

Lesson 1: Mulaipariⁱⁱ festival

The academic year started with a folk song and dance performed around the seedlings during the *mulaipari* (sowing) festival. A conversation on the process of sowing – preparing the seeds for sowing, the festival of sowing, and how the entire process is planned – was initiated in the classroom. Children were divided into groups to collect the required information from the locality. All of them were involved in various activities, especially germination-related activities, like observing and

reporting the growth of the seedlings. Talking about, drawing and writing about the germination became a part of their daily schedule.

The whole class got involved in most of the activities, which included preparing beds for seeds, identifying the types of seeds, collecting seedlings etc. Collecting information, reading and discussions on activities which are directly related to their life, made the children happy. The community was also involved in all this. Students did some of the work independently, too, like planting seeds at home.

The many conversations that were generated over these ideas helped in bringing new ideas from the various other school subjects. Children were eager to share what they knew and were ready to learn what they did not.

Lesson 2: Palm tree

The teacher wrote words from the palm tree lesson on the blackboard, and these were read aloud first by her and then by the students. These included words in Tamil that stand for the palm tree, fan, leaves, birds, bird's nest and basket. Students made sentences with these, and they were asked how each of these words was connected to the palm tree. For example, what part of the tree is called *panai olai* (palm leaf)?

The discussion then moved on to the parts of the tree or a plant (integrating EVS). Now that the children had identified the leaf and the fruit of the palm tree, the question was what would the other parts look like? One student described it

while another drew the tree on the blackboard. Students were further made to talk about the palm fruit and the tender palm fruit. Some children were confused about the two, so pictures of the palm fruit were shown, and this helped them to distinguish between a mature palm fruit and a tender palm fruit.

The students were shown a picture of a toy made using empty shells of the palm fruit and one of the students demonstrated how it was made. The teacher also organised a palmyra leaf craft workshop in which children were able to make a fan, watch, sparrow, crown and other small articles using palm leaves. They were enthusiastically involved in the process. They were shown other articles made of palm leaves – small purses, containers, hats and hand fans. Children were seen excitedly discussing the weaving methods among themselves.

Other lessons and learnings

Similarly, for the lesson on proverbs on nature and agriculture, children collected proverbs and discussed the context. They also made illustrations and posters on the proverbs. For the lesson on water bodies, children made a list of water bodies; they visited and observed these and took notes. This helped in creating an awareness of the uses of water and in studying water consumption.

For the lesson on 'enjoying nature', we visited a waterbody and asked the children to use their imagination to write and draw the early morning scene to make it even more enjoyable. We included



Picture 1. Mulaipaari lesson in class IV Tamil textbook.

the sharing of feelings about early morning weather and read out some poetry and stories on the theme of nature, these included the poet Bharathidasan's nature songs and poet Bharathiyar's poems on wind, sun and water. So, art and other aesthetic components, like singing, dancing, creating posters of popular proverbs and food displays were included in our teaching plans.

Along with these activities, mathematical concepts, like counting trees and seedlings, measuring, and estimating the height of the trees, and the area covered by the trees, were also incorporated. Language skills dovetailed into the EVS, as well as mathematical concepts, to ensure students' learning. We created various worksheets based on nature activities with children. We have used EVS worksheets of class V for class IV seeding.



Figure 2. Students' drawings based on nature-based outdoor activities.



Figure 3. A child presenting an environment-based story to the class.



Figure 4. Clay figures of animals made by the students.

In summary

The idea of integrating environmental themes with language teaching ensured meaningful experiential learning with the help of various aspects of nature and moving from the known to the unknown with the support of events from daily life practices made the students' understanding better. Homeroom teachers were able to integrate nature-based

lessons and activities by combining subjects, like language-EVS lessons, and Tamil-English. The teaching-learning process, including the classroom practices, became so much more effective when we integrated nature-based experiences along with languages and maths to increase ecological consciousness.

Endnotes

- i Voluntary Teacher Forums (VTF) are facilitated by the Azim Premji Foundation in different locations of India, as part of an integrated and multimodal approach toward continuous teacher professional development.
- ii A festival in Tamil Nadu to celebrate the sowing of seeds/seedlings and hoping for a good harvest.



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