

BRIDGING THE GAP: ENVIRONMENTAL EDUCATION AND INTEGRATION OF TECHNOLOGY

Vidya N. Jadhav¹, Ph.D. & Sujata P. Pawar²

¹Adv. Vitthalrao Hande, College of Education, Nashik sujatavijay@gmail.com

²P.V.G. College of Education & Research, Nashik

Abstract

Environmental education is very important issue. It is duty of teacher to inculcate environmental awareness among students. Students in Indian school come from diverse background. Some may not have easy access to technology. As 21st century educators it is our duty to find strategies that level the educational playing field for all learners. Teachers can foster the student engagement in activities that support appreciation of the environment and natural resources in understanding the environmental issues. Across the nation, schools are increasing access to technologies in the classroom. Therefore, providing education with appropriate resources and strategies supports environmental literacy should be essential component of all technology plans.



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Introduction

Students in India come in school from diverse needs, particularly in terms of their access to nature and technology. It is our job as a teacher to help level the playing field and provide all students an equal chance to success. By integrating the two seemingly opposed areas of nature and technology, we can create an opportunity for young children to become both technologically and environmentally literate. In this article we explore how technology can be used to encourage students to engage in activities that will help them to appreciate nature and environmental issues.

Nature Deficit

Over 50% of students of the Indian population now lives in urban areas. When Children go outside they often see only streets building, shops, cars and crowd of people. Students do not know the importance of reducing pollution and recycling. Environmental education encourages students to think globally but act locally regarding environment and environmental issues. Environmental education is not a study about plants and animals but it is invaluable tool for teaching critical thinking skills and applying these skills to the students' everyday world.

Necessity of integration of technology: Education can integrate technology and media with environmental education through activities that explore the skills of creative thinking, problem solving qualities, communication skills ,collaborative nature. Curriculum should be

- Based on research and theory
- Integrates authentic experiences
- Child centered and inquiry based
- Based on child differentiation

Effective use of technology in teaching: One of the most remarkable changes in the classroom over the past two decades has been the incredible advances in classroom technology. According to the Indian Census Bureau, in 2011 , 85% of households did not have computer and internet access. This means that many students depends on the school setting .Therefore it is necessary to provide them with necessary technological practice to prepare them for success as they go through the school system and prepare for the higher education. In order to introduce technology in age appropriate and educationally effective ways Educators use following strategies-

1. By keeping himself abreast with the new development in the subject-

Select, use, integrate and evaluate technology and interactive media tools in international and developmentally appropriate ways,giving careful attention to the appropriateness and the quality of content, the child's experience, and the opportunities for co-engagement.

2. Use of proper technology for teaching-

Prohibit the passive use of television , videos DVDs and other non-interactive technologies and media in early childhood programs for students' .

3. By using reference Sources-

Teachers prepare content for teaching or presentation with the available books on environmental studies. Teachers should not depend on bookish content because content is changing very fast due to knowledge explosion.

There are several reference sources that can be used.Some reference sources are as follows-

- <http://www.hpcc.astro.washington.edu/scied/sciref.html>
- <http://www.accurate-eye.com.au/earth.html>

We can give references from National Geographic channel.

4. Creative assignments-

Teachers should give homework, assignment which require Internet surfing by the learners. Project work should be given by teachers with the help of internet and works on projects are done by students taking guidelines from internet.

5. Online tuitions and coaching-

Students can get home tuitions and guidance online. Some home tuitions sites are given below-

- The Biology project (<http://biology.arizona.edu/>)
- www.schoolnetindia.com
- <http://www.ericse.org.homework.html>

Tools for teachers

1) Webcams

Webcams can bring distant places to the classroom allow learners to observe event in real time. Eg. If migration is the topic of the day , watching polar bears migrate in Canada can be accomplished via Polar Bear International webcam. Animals active with webcams and sometimes not. But we can see snippets of the animals activities from the previous days from the data recorded by scientists. Webcams can also allow videoconferencing and collaboration with other children, educators, or experts across the world.

Here are some webcams –

- Eagle Cam
- Panda Cam Atlanta Zoo
- Polar Bear International
- Volcano Webcams
- NOAA Webcam

2) Cameras and videos

Digital cameras and videos equipment offer children an opportunity to share their views of the environment with others. A digital image can capture a moment in time and allow children to revisit the phenomenon or location. Students can use cameras and video to record data. Student can take photos of trees , shrubs, insects throughout the year. students can take pictures of specific shapes or colours.

3) Mobile Technology

Mobile technology is entering in classroom with very speed. Teachers and students can use variety of technologies at their fingertips. Smart phones , iPods , tablets are providing learners access to vast amount of interactive and collaborative tools. Students can use variety of technology on mobile inside the classroom and beyond. A collection of environmental education apps offers the classroom teacher opportunities to take instruction outdoors.

As 21st century teachers it is our responsibility to give best knowledge to our students. Technology needs to be engaging and support decision making. So schools need to focus more on the effective use of technology in the classrooms. In the future , we would see a proliferation of content using Augmented Reality (AR) , Virtual Reality (VR) and Mixed Reality (MR) technologies. In terms of pedagogy technology can help adoption of flipped learning to great effect.

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