

Environmental Education's Role in Sustainable Development: Case Study of India

The Rio Summit in 1992 produced *Agenda 21*. This international agreement developed a strategy for addressing sustainable development throughout the world by calling for increase community participation in addressing environmental, social, and economic concerns that affect their community. Although there was much debate about approaches for sustainable development, there was near universal support for the need to provide improved educational opportunities for students that allows them to develop valuable life skills such as communication and critical thinking.

Case Study

Uttarakhand Environmental Education Center (UEEC) – Uttaranchal, India

The Area

Uttaranchal is a state in northern India, bordered by Nepal in the east and China to the north. The state area is approximately 51,000 km² and consists primarily of mountain ridges and valleys, with some peaks having an altitude of over 7,800 meters.

Uttarakhand Environmental Education Center (UEEC) works with some of the nine million inhabitants who live in the state, primarily in the zones between 1,000 and 3,500 meters. The area in which UEEC works is forested primarily by oak (*Quercus incana*) and is part of the upper watersheds of many large river systems of the Asian sub-continent, principally the Ganga and Yamuna Rivers..

UEEC History

In 1986 the government of India decreed the importance of teaching environmental education in schools throughout the country, in reaction to an increased awareness of unsustainable practices throughout the country, particularly in agriculture. The government hoped to use environmental education programs in schools and communities as a conduit to increase awareness about the environment, and give citizens the knowledge and skills to respond to environmental issues

UEEC & Environmental Education

The UEEC was created to meet these goals as a non-governmental organization (NGO). The mission of UEEC “works to develop cohesive communities empowered to create personally and ecologically rich, sustainable lives for themselves and future generations, using ‘the village as an ecosystem’ as an organizing concept” .In order to advance the mission of UEEC the concept of “the village as an ecosystem” became the dominate strategy for promoting their goals. This concept and corresponding curriculum, uses the village as the unifying model, focusing on the local village ecosystem and the human/environment interactions taking place. Rather than observing their surroundings in a form of “nature-study”, students use their village ecosystem as a practical laboratory in which to apply ideas learned in the classroom to their lives within the village .

UEEC and the government identified three possibilities for implementing the concepts of environmental education into schools: infuse environmental education themes into (1) pre-existing curriculum, (2) an extra-curricular class or club, or (3) a separate class. After the three alternatives were tested, the third option was chosen as the most beneficial and holistic for students. Continued development and improvements of the class has led it to be a mandatory

subject for students during their grades 6 through 10 . As a separate long-term class, ideas and skills from several other subject areas can be incorporated and gives students ample time to develop these skills in a practical setting.

However, to effectively teach the necessary concepts and skills development, a new curriculum was needed. Existing materials were often too broad and difficult for students to relate with or understand such as worldwide deforestation . Because of these factors, a curriculum that addressed the "...concepts of sustainability and the carrying capacity of the village ecosystem" was needed . Collaboration between teachers, ecologists, and community members enabled the development of a curriculum entitled *Our Land, Our Life* for the class.

The concepts of *Our Land, Our Life* are geared toward promoting an increased student understanding of ideas through practical skills development, idea exploration, and how these concepts relate to and interact with the village.

A final consideration of the curriculum focuses on successful teacher development in using the curriculum by way of practical and effective trainings .

The student investigations gather data from numerous sources such as community members, local government officials, as well as personal quantitative experiences. A final step gives students opportunities to share their investigations and potential solutions in community forums .

For example, 6th graders would study the natural vegetation of their village, while 7th through 10th graders would use those preliminary experiences in forest-area rehabilitation practice.

Our Land, Our Life is taught to over 35,000 students within the Uttaranchal state by 600 UEEC trained teachers in 318 schools. The government and UEEC have plans to increase the number of participating students and schools throughout the region . However,UEEC is faced with challenges in maintaining the course's overall effectiveness, development, and teacher retention.

Conclusion

The unique approach taken by UEEC to address environmental and community concerns can attribute its success to a long-term commitment toward community improvement, its adaptability, and developed community trust (Hollweg, 2007). The expansion of these attributes allowed UEEC to promote their goals, and contribute positively to improving community resources in the villages in which they work. By creating opportunities for students to experience and learn first-hand about their village resources, UEEC is able to influence sustainable development and resource management in the region of Uttaranchal through improved educational techniques that use the village environment as a unifying theme.