

Environmental Education: Jack of All Trades, Saviour of the World

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The atmospheric carbon dioxide concentration in January 2018 reached 407.79 ppm (NASA, 2018), after crossing the 400 ppm mark in 2013. The carbon dioxide levels are consistently increasing each year and breaking previous year records. At the very least, this should have rung alarm bells in nations around the world. However, on 26 January 2018, China released an official Arctic policy white paper for developing shipping lanes due to the melting ice because of global warming (Reuters, 2018). In 2017, 16 significant weather and climate disaster events took place in the United States which led to an estimated loss of \$305 billion and 362 human lives (NOAA, 2018). Despite this, on 1 June 2017, the President of the United States announced the withdrawal of his country from the UN-led Paris Climate Agreement of 2015. The scientific community is now in consensus on how our use of fossil fuel has accelerated global warming. However, efforts for transitioning from coal to clean economy are too little too late, in both developing and developed countries. Millions of years ago, Earth was a hot boiling planet and the emergence and subsequent submergence of organic matter removed carbon dioxide from the atmosphere and sequestered it deep in the Earth's lithosphere. Our society has been removing this 'fossil fuel' from inside the Earth and releasing it back into the atmosphere since the last 200 years. Clearly, the resultant warming of the planet is not as obvious as it should be, to policy makers and to people at large.

Simultaneously, the scale and pace of economic development today is having an adverse impact on the environment. Unplanned development, based purely on the principle of profit, has degraded natural resources and is destroying functional ecosystems. Societal development is following a similar path and instead of inculcating environmental harmony, a highly

consumptive lifestyle has become the norm. Awareness on population control has become a thing of the past and we have now trained ourselves to appreciate population as an asset. Consequently, rising human population has led to the transformation of natural landscapes into human settlements thereby decreasing wilderness areas significantly. This has resulted in anthropogenic erosion of biodiversity -- so much so that it has triggered the sixth mass extinction on the planet (Ceballos et al., 2017). Poaching of wildlife and man-wildlife conflict in the ecological corridors have indeed shrunk habitats and are resulting in rapid loss of wildlife. The Asiatic Cheetah became locally extinct from India in 1952. Only three Northern White Rhinoceros remain in the world (IUCN, 2018a). And only about 500 Asiatic lions are left in the wild today, all of them restricted to a single population in Gir National Park in the Indian state of Gujarat (IUCN, 2018b). It needs mention here that in order to avoid 'all eggs in the same basket' catastrophe, a new habitat has been created for the Asiatic lions in a state neighbouring to Gujarat. However, the principle of focusing on profit and profit alone has ensured that the Gujarat State Government, which benefits greatly from lion tourism, has refused to give away even a single pair of healthy lions for relocation (Burton, 2011).

The United Nations marked 2005-2014 as the Decade for Education for Sustainable Development. The focus was to integrate the balance between environment and development in our education system for creating a more sustainable future. However, considering the rate and scale of environmental degradation today (and the response of the political leadership - or the lack thereof), there is a dual need of both integrating sustainability in all disciplines and of better establishing the discipline of Environmental Studies (ES) at all levels. This is because we not only need to protect existing environment and natural resources but also need to reclaim and restore

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degraded ecosystems and re-strategize our developmental policies – all of which requires an in-depth understanding of the working of the global, regional and local environment. The change must begin from our schools where we continue to encourage only three streams of academic discourse, Science, Social Science and Commerce. A fourth, multidisciplinary stream of Environmental Studies is wanting and must bring together disciplines having direct relevance for understanding and managing the environment. Higher education institutions (HEIs), some of which provide postgraduate (University) training in ES but have almost negligible ES programs at the undergraduate (College) level, also need to play a proactive role. The introduction of ES at the College level would go a long way in developing adequate human resource for managing and mitigating the ongoing environmental crisis and for sustainable protection of ‘our common environment.’

The adoption and implementation of ES in HEIs is not without challenges. An important barrier to its implementation is the now diminishing belief that multidisciplinary programs like Environmental Studies may dilute specialization. And that the products of such programs will become the proverbial jack of all trades. Such archaic beliefs are more prevalent in developing countries where the education system is either stagnant or undergoing a slow and steady change. For example, with the introduction of the Choice Based Credit System in India recently, there has been greater appreciation of pursuing trans-disciplinary courses. However, since environmental education does draw from different disciplines in order to protect, conserve and manage the natural resources of the planet, the ‘jack of all trades’ remark indeed warrants investigation. A preliminary analysis suggests that it is not the subject but its implementation that has been a challenge. Often, ES is simply taught by introducing the students to a little bit of everything. This shallow understanding of multidisciplinary teaching needs to improve, with time intensive interventions and well-developed leadership skills. Further, it is equally important to induct suitable learners in ES programs, since the complications of multidisciplinary and complexities of trans-disciplinary are not everybody’s cup of tea. Thus, everything - from the process of selecting faculty to the

process of admitting students needs careful attention for the successful implementation of environment education.

Effective ES programs are needed at all levels of education today in order to mitigate and adapt to the ongoing environmental crisis. This is also an essential pre-requisite if we are serious about achieving the UN-Sustainable Development Goals in time. The environmental crisis is real and has already arrived. Replacement of traditional farming practices with chemicals based agriculture since the 1970s is now having deleterious impacts in the countryside. Unplanned urbanisation is making our cities shut down schools due to air pollution. In such a scenario, environmental education may or may not be the jack of all trades, however, it is certainly an essential requirement for saving the world. Implementing adequate ES programs in HEIs should thus become a priority focus of nations around the world.

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