

## Chapter 52

# Environmental Education and Education for Sustainable Development Through Mobile Learning: Transgressing the Geographical Boundaries

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### **ABSTRACT**

*Growing planetary challenges demand environmental consciousness and energetic workforce. The environmental education and education for sustainable development are essential for the knowledge workers so as to intellectually empower them with cognitive skills, analytical abilities and problem solving capabilities leading to the efficient development and implementation of sustainable development policies and programmes. Increasing Access through Mobile Learning for EE and ESD is the need of the hour, especially for developing countries where the use of mobile technology is increasing at a phenomenal rate. Mobile learning will augment the efficacy of participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for environment and sustainable development. M-Learning enables learners to merge their learning experiences in a shared collaborative environment. This paper shows how mobile learning can transform the delivery of EE and ESD.*

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## **INTRODUCTION**

We are in the midst of a period of increasing interconnected and complex global challenges that seek action across temporal and spatial scales, diverse sectors, and concerted efforts from global citizens. The environment on account of human's action has been experiencing imbalances and ecological catastrophe. Indeed, anthropogenic pressures on the Earth System have reached a scale where abrupt global environmental change can no longer be excluded (Rockstrom et al., 2009a). Environmental issues like climate change and global warming, biodiversity loss, species extinction, the rapid depletion of natural resources, degradation of global commons, stratospheric ozone depletion have been constraining the safe operating space and transgressing the planetary boundaries endangering the existence of human societies (Rockstrom et al., 2009b). The global environmental problems if not scientifically managed may end up in the civilizational collapse. Nevertheless, the underlying commonality among these environmental issues is interrelatedness, complexity, and difficulty in identifying and implementing solutions. One common solution to resolve these environmental challenges is introduction of environmental education and education for sustainable development into the educational curriculum and capacity building. Environmental Education aims to develop new knowledge and skills, values and attitudes, in a drive towards a better quality of environment and higher quality of life for present and future generations living within that environment (UNESCO, 1975).

## **EMERGENCE OF ENVIRONMENTAL EDUCATION**

The man - environment relationship have been established in the early periods itself. In the recent past, human beings have attained the ability to destroy natural life at devastating rates and magnitude. Human activities have adverse impact on the environment on varied spatio-temporal scales and extents (Pouloupoulos, 2016) and it led to global change. Global change according to World Health Organization refers to global environmental hazards to human health and the hazards may include climate change, stratospheric ozone depletion, changes in ecosystems due to loss of biodiversity, changes in hydrological systems and the supplies of freshwater, land degradation, urbanization and stresses on food producing system (Pouloupoulos, 2016).

In order to conserve the environment and sustainably manage the natural resources adopting ecological principles, the need for environmental education was felt world over in the early 1970's. The events that followed Stockholm Conference on Human and Environment (1972) only reiterated the need for environmental education and solemn pledge by the United Nations body and national governments to save the environment from increasing human print. Recommendation 96 of the Stockholm Conference on the Human Environment called for the development of environmental education as one of the most critical elements of an attack on the world's environmental crisis. In the spirit of the progressive Tbilisi Declaration, arising out of the First Intergovernmental Conference on Environmental Education in Tbilisi, Environmental Education is viewed broadly to include issues of inequity, poverty, values and ethics (Sinha et al., 1985). Environmental education can be defined as learning to protect and improve environment in a systematic, focused, planned and knowledge intensive way. The environmental education must be broad based and strongly related to the principles mentioned in the United Nations Declaration on the New International Economic Order (UNESCO, 1975).

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