Chapter 10

Ecology, Sustainability, and Scientific Education: The Evolution of an Environmental Pedagogy

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ABSTRACT

Environmental education is a new discipline, which has been gaining increasing importance in recent decades. It is a fundamental tool to sensitize citizens and communities to greater responsibility and attention to environmental issues and good governance of the territory. The educational component allows us to transform scientific languages into simple languages that can be appropriated and understood by the different social groups, and the environmental component that tries to reconstruct. These relationships are created by man with nature, but through cultural parameters. The growing concern for environmental devastation has its roots in the decade of the 1970s. Countless efforts have been made to draw the attention of populations to this topic. Among these attempts come out different approaches such as sustainable development that uses environmental education and local sustainability as tools to prevent damages. This chapter describes the key theoretical and government references that support environmental education, focusing on their relationship and the rising of a new sector of work.

DOI: 10.4018/978-1-5225-7903-8.ch010

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INTRODUCTION

The growing attention to the interconnection between the environmental, social and economic dynamics has led to the elaboration of the broader concept of Education for Sustainable Development. It concerns not only the environment but also the economy (consumption, poverty, the north and south of the world) and society (rights, peace, health, cultural diversity). It is a lifelong process, with a holistic approach, which is not limited to “formal” learning, but also extends to non-formal and informal learning.

Education for Sustainable Development involves all aspects of life and the common values of fairness and respect for others, for future generations, for diversity, for the environment, for the resources of the Earth.

In 2002, during the World Summit in Johannesburg, UNESCO launched the Global Program of Action on Education for Sustainable Development (GAP) to contribute to the new Agenda 2030. Among its new 17 Goals, education plays a central role with particular reference to education (Ministero dell’Ambiente Italiano, n.d.a).

The environmental challenge, linked to the conservation of our planet’s resources, represents a challenge no longer avoidable for future generations.

Nowadays, the whole world, in particular Italy and Europe, require radically different choices from those made in the past: far from the traditional production model, directed towards a new model of economy that respects the environment, oriented to a society that does not produce waste but knows how to create wealth and well-being with the reuse and regeneration of resources. In order for this to happen, a profound change of mentality is required that involves institutions, businesses, and individuals. And this new national awareness can only start from schools and students, of all ages. Above all by the youngest, what we might call “environmental natives”: a generation that in everyday behavior already finds a respect for the environment in which it lives (AA.VV., 2014).

The thesis that more stringent environmental regulations lead to a slowdown in economic growth and negative effects on employment is not corroborated by empirical studies. For example, in several countries, the impetus to technological renewal induced by environmental regulations has shown positive effects on employment. But, in industrial sectors, the legitimate concerns that environmental protection may pose a threat to the competitiveness of companies remain an open problem. The adoption of purifiers, filters and other measures that focus on the discharge of production waste represents for the enterprise an additional net cost; on the other hand, the introduction of clean upstream technologies, during the production process, is often a source of significant savings in energy and raw materials in the medium and
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