

HUMAN RESOURCE DEVELOPMENT AND ENVIRONMENTAL CHANGE

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Summary

In this article we broadly considered the relationship between human systems and environmental systems -- focusing on the effect of human systems on environmental systems *and* the response of human systems to global environmental change. The scope and intensity of the impact of human systems is increasingly causing global-scale degradation to environmental systems. It is a truism that the development of human systems (e.g., cultural, political, economic, and sociotechnical subsystems) and particularly the rise of modern industrial economies is effecting global environmental change.

We sought not merely to consider the effect of human systems on environmental

systems; rather we considered the response of human systems to global environmental change. We focused on the response of corporations, and, more specifically, the corporation's response of human resource development -- manifested as a sort of adult environmental education in the workplace. Two forces were identified as having molded a human resource development response to global environmental change. One has been the force of educators -- as it seeks to leverage education as a means of achieving sustainable development. The other has been the force of businesses -- as it seeks to transform business practices through more sustainable forms of management.

Environmental management has developed as a sort of applied, action-oriented, adult environmental education practiced by businesses. It has bridged the knowledge versus action chasm between environmentalists and adult environmental educators -- creating, instead, a knowledge *and* action orientation. We considered the human resource development functions that are most affected by the greening of business: human resource planning, training, management development, career development, and organizational development, as well as organizational learning and non-employee development. We sought to explain how HRD is shaping the emerging discipline of environmental management.

1. Introduction: Human Resource Development and Environmental Change

The earth can be viewed as a complex system composed of a number of differentiable but interacting subsystems -- including the geosphere, hydrosphere, biosphere, and atmosphere. These subsystems can be thought of as *environmental systems* -- from the human perspective they constitute the environment. In addition, there exists the anthroposphere -- which can be subdivided into cultural, political, economic, and sociotechnical subsystems. These subsystems can be thought of as *human systems*. Here we will consider the relationship between human systems and environmental systems -- focusing on the effect of human systems on environmental systems *and* the response of human systems to global environmental change.

Consider the following general examples of the effect of human systems on global environmental systems. First, when we examine the cultural subsystem, we find that human values related to material possessions and the relation of humanity and nature are often considered to be at the root of environmental degradation. Second, when we examine the political-economic subsystem, we realize that economic growth has carried with it a heavy burden on the environment. For the first time in human history, economic activity is so extensive that environmental change is produced at the global level. Finally, when we examine sociotechnical systems, we find that technology can influence environmental change by finding new ways to discover and exploit natural resources, changing the amount of resources required, or the amount of waste produced. Thus, technologies may either increase or decrease the impact of human activity on the environment.

While the end of the millennium allows us to reflect upon the unprecedented gains in many of the indicators that we use to gauge progress in human development -- life expectancy, education, and per capita income -- we are also reminded of the effect of human systems on environmental systems. The world's population has reached six

billion with projections of future population reaching between eight and twelve billion in 2050, with nearly all of the growth expected in the developing world. This increase in people is accompanied by an increase in the diversity of the actors who influence how our human systems and environmental systems are shaped and what decisions we make. Global food production will struggle to meet the future needs of this growing population without a transition to more resource-efficient and less polluting farming methods. And, similarly, consumption of natural resources remains high in modern industrial economies -- putting an enormous strain on already stressed environmental systems. The scope and intensity of the impact of human systems is increasingly causing global-scale degradation to environmental systems.

2. Global Environmental Change: The Response of Human Systems

It is a truism that the development of human systems (e.g., cultural, political, economic, and sociotechnical subsystems) and particularly the rise of modern industrial economies is effecting global environmental change. Here we will seek not merely to consider the effect of human systems on environmental systems; rather we will also consider the response of human systems to global environmental change. Four kinds of actors are recognized as making significant, organized responses to global environmental changes: governments, communities, social movements, and corporations. We will focus on the response of corporations, and, more specifically, the corporation's response of human resource development (HRD) -- manifested as a sort of adult environmental education in the workplace.

Two forces have molded the response of human resource development. One is the force of educators -- as it seeks to leverage education as a means of achieving sustainable development. The other is the force of businesses -- as it seeks to transform business practices through more sustainable forms of management. Here we will examine these two forces -- education and business -- that have molded a human resource development response to global environmental change. We will explain the interrelatedness of the responses of transnational environmental education institutions, adult environmental education, the growth of the environment industry, environmental management -- and, how these have given rise to the practice of HRD in environmental management.

2.1. Transnational Environmental Education Institutions

Major United Nations reports have recognized that our global environmental problems will not be solved by a single action, but through long-term strategies for achieving sustainable development. Education has been offered as one such long-term strategy. The United Nations (UN), especially the United Nations Environment Program (UNEP), and other international organizations have been working in the field of environmental education for nearly the last thirty years (since the Stockholm Conference in 1972).

In 1972, the United Nations Conference on the Human Environment (the Stockholm Conference) recommended the creation of a UN Environment Program -- "an international program in environmental education, interdisciplinary in approach, in school and out of school, encompassing all levels of education and directed towards the

general public, in particular the ordinary citizen living in rural and urban areas, youth and adult alike, with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment.”

Twenty years later, the United Nations Conference on Environment and Development (UNCED) held in 1992 in Rio de Janeiro (the “Earth Summit”) served as an important milestone for environmental education. *Agenda 21*, the blueprint for action from the UNCED Earth Summit in Rio de Janeiro, elevated the status of environmental education, stating “education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.” In addition, *Agenda 21* afforded education its own chapter -- *Chapter 36, Promoting education, public awareness and training*, which called on nations to prepare a national strategy for environmental education and training.

While the twenty years between Stockholm and Johannesburg witnessed great strides in environmental education, especially in terms of increasing awareness and a rise in knowledge about environmental issues, some ask whether it had managed to change people’s behavior or moved them into taking action for the environment. This concern has also been raised in the field of adult environmental education -- framed as knowledge versus action concern.

2.2. Adult Environmental Education

Some transnational institutions have also focused more specifically on *adult* environmental education. For example, the Fifth International Conference on Adult Education (CONFINTEA V) organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) was held in Hamburg, Germany in July 1997. *Adult Environmental Education: Awareness for Environmental Action* was one of 33 thematic working groups. Adult education was recognized as crucial “in addressing the world’s environmental problems, since adults are the current decision-makers of the world.” In addition, the conference asserted that environment is projected as a key issue in adult education for the twenty-first century.

While adult environmental education has been recognized as a response to global environmental change, the approach has remained knowledge-focused as witnessed by the growth of a vocabulary that includes terms like: “environmental andragogy,” “green literacy,” and “pedagogy of ecological responsibility.” Criticism of adult environmental education is characterized by the questioning of the objective of environmental education for adult learners: *knowledge or action?* In this argument, environmentalists are positioned as supporting the action objective, which is less likely true of adult educators, who are positioned as concerned with knowledge rather than action objectives. However, this is changing. The Final Report of CONFINTEA V reads, “We commit ourselves to: Promoting the competence and involvement of civil society in dealing with environmental and development problems ... by making use of adult education.” Notice the emphasis on competence (knowledge) *and* involvement (action). The question remains -- who will take action? In the report of the World Commission on Environment and Development, *Our Common Future*, change is understood to be promoted through non-governmental organizations (NGOs), industries, trade unions,

youth groups, scientific research organizations, and the media -- not through educational institutions.

Recall, in the Final Report of CONFINTEA V, adult education was recognized as crucial “in addressing the world’s environmental problems, since adults are the current decision-makers of the world.” More accurately stated (given the reality of political power) adults -- *acting within businesses in modern industrial economies* -- are the current decision-makers of the world. Thus, businesses, not educational institutions, are the conduits of change. The report of the World Commission on Environment and Development, *Our Common Future*, appears to have been correct. As we enter the new millennium we are able confidently to state that we are seeing businesses assume this role. We have witnessed the birth of environmental management -- a sort of applied, action-oriented, adult environmental education practiced by businesses. However, there is a lack of recognition of the growth of the intertwining of HRD and environmental management. Here we illuminate how HRD practices are intertwined with environmental management practices and suggest this relationship will continue to grow in the new millennium.

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Biographical Sketch

Nick Nissley is an Assistant Professor of Organization Learning and Development in the School of Education at The University of St. Thomas in Minneapolis, Minnesota, USA. He received his Ed.D. from the George Washington University Graduate School of Education and Human Development. Nick is an academician and practitioner of human resource development and environmental management. As a practitioner, he has served an Australian-based mining company as Environmental Affairs Manager and as Director of Human Resource Management. He has also served a major Midwest USA healthcare system as Vice-President of Organization Development and Learning. In addition, Nick has served on the Board of Directors of the Glen Helen Ecology Institute. As an academician, Nick has taught courses in human resource development and environmental management. His research interests are in the area of organizational culture – including symbolic and aesthetic interests.