

Resources in Review

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Essential Readings in Environmental Education,

edited by Harold R. Hungerford, William J. Bluhm, Trudi L. Volk, and John M. Ramsey. Champaign, IL: Stipes. 1998. Paperback. ISBN 0-87563-756-6.

Essential Readings in Environmental Education consists of 29 papers grouped into eight parts. The papers cover a wide range of topics dealing with the history of environmental education (EE), environmental literacy, curricula, instruction, evaluation, research issues, nonformal EE, and other topics of interest. Harold R. Hungerford, the principal editor, is a pioneer and long-time leader in the field who, as a result of his contributions and those of his former students (several of whom have contributed papers to this publication), has acquired legendary status in the field. An editorial team of highly competent scholars ably assists him.

A major purpose of this book is, as the editors note, "to examine the tremendous need for validity in a field that tends often to be intuitively driven." Through this collection of papers, the editors attempt to make their case that EE is a valid field of academic inquiry that has amassed, and contin-

ues to amass, a collection of "state of the art" studies. The book presents a detailed overview of those elements that might take EE from the intuitive to the valid — to a field where there truly is a defensible substantive structure. In the book, the editors attempt to take the reader from the strong criticisms of the field to equally strong statements of a well-defined philosophy and present some of the best research conducted in EE.

Part I of the book, *The EE Landscape*, presents eight significant papers that have helped to set the stage for EE as a new field. Part I includes papers of historical importance by such noted pioneers and EE historians as John Disinger, William Stapp, Hungerford, and John Hug, and by some "second generation scholars" (Gerald Culen, Michelle Kirk, Richard Wilke, and Abby Ruskey) as well. Included in this part are the Tbilisi Declaration and papers that address the history of the field, the problems it has faced, the perennial issue of defining EE, the role of EE, some myths about EE, and the current status of EE in the United States.

Part II opens with an essay dealing with an issue that is receiving considerable attention in education: standards.

Deborah Simmons, a nationally recognized researcher in this area, discusses, among other things, the need for standards, the origin of standards, and the relations that should exist between standards and the overriding goal of environmental literacy. In another paper, Trudi Volk and William McBeth discuss environmental literacy and the status of environmental literacy in the United States and make several recommendations on how environmental literacy might be measured in the future.

The five papers in Part III deal with EE curriculum. The papers were written by Hungerford and his former students. Hence, they approach the topic of curriculum essentially from a Hungerfordian perspective. But that certainly is not a bad thing, because Hungerford and many of his former students rank very high among the early pathfinders and current leaders in the area of EE curriculum and curriculum development. In the first paper in Part III, Hungerford, R. Ben Peyton, and Wilke present and discuss recommended goals for curriculum development in EE. Although the paper was first published in 1980 (and created quite a stir at the time), it still provides information that is both useful and valid.

Other papers deal with EE curricula for primary schools (Hungerford and Volk), the special problems encountered by EE in the secondary schools (John Ramsey, Hungerford, and Volk), what it takes to produce a successful EE program that emphasizes the development and/or changes in overt environmental behavior (Volk), and a comparison of four environmental problem solving models (Ramsey). Although each of these papers stands on its own, collectively they represent an important comprehensive package for both those just getting starting in the field as well as for educators who have been active in EE for some time.

Part IV, Environmental Education Instruction, includes two papers about topics on which the Hungerford et al. school of thought has set the pace. "A Technique for Analyzing Environmental Issues," by Ramsey, Hungerford, and Volk, helps educators deal effectively with environmental issues — a critical component of EE. This reading presents well-researched, well-validated educational techniques for dealing with analyzing environmental issues. In "So . . . You Want to Teach Issues?" Ramsey and Hungerford look at EE in relation to Science-Technology-Society (STS) issues and provide some options for teachers interested in helping students learn about STS issues and how STS relates to EE.

Evaluation (Part V) consists only of one paper: "Assessment in Environmental Education," by Thomas Marcinkowski, one of the

most knowledgeable and talented environmental educators I can think of. In this lengthy article, he shares his encyclopedic knowledge of the field and focuses on an often overlooked, misunderstood, but extremely valuable aspect of education in general, and EE in particular. In this paper, designed for education professionals with varying backgrounds, Marcinkowski starts out by defining key terms that are germane to the topics of assessment. He provides helpful insights for measurement, testing, assessment, and evaluation. In brief, he capably addresses the issues — Why do we evaluate? Why do we measure? Why do we assess? He then goes on to address what gets measured, tested, assessed, and evaluated.

Going beyond traditional assessment techniques, Marcinkowski provides important insights and guidance into the newest approach to assessment — Alternative Assessment — describing numerous approaches to using this method. He provides an excellent array of practical examples and test item types for the cognitive and affective domains. This paper, although lengthy, offers much to the environmental educator. It provides a wealth of information for both the newcomer and the experienced educator. This summary is a significant contribution to the literature in the field of EE.

The next part of the book, Environmental Education Research Topics, offers four papers that examine a long-neglected topic in EE: research. In the first paper, Frank Leeming, William Dwyer, Bryan Porter, and

Melissa Cobern take a critical look at the outcome research in EE, analyzing 34 EE studies published since 1974. Marcinkowski, in the second paper, delves into three major studies (actually doctoral dissertations, including his own) dealing with the predictors of responsible environmental behavior. These are important contributions to the literature, particularly for those working in curriculum development or instructional design in EE. In another paper, Hungerford and Volk also look at responsible environmental behavior, focusing on the research that has led to the development of a refined model of major and minor variables included in responsible environmental behavior, an area in which the authors have long been leaders. In the last paper, Nicholas Smith-Sebasto provides an assessment of the state of EE research and includes recommendations for needed research.

Part VII, Nonformal EE Instruction, includes three papers. Doug Knapp presents what he perceives to be the similarities and differences that exist between environmental interpretation and EE, and Gerri Pomerantz looks at educational materials designed for natural resource education for elementary school children. Pomerantz presents some of the pros and cons of these materials. The last paper looks at the extent to which nature and EE centers meet generally accepted goals of EE, especially those dealing with responsible environmental behavior. Simmons has added an update to this interesting paper, originally published several years ago.

The final part of the book, *A Potpourri*, offers several papers of interest and significance dealing with a variety of topics. Two papers were written by Ramsey: One offers an analysis of an anti-EE article, and the second looks at the science education reform movement and what it means for social responsibility. Peter Rubba and Randall Wiesenmayer look at precollege students and STS education, exploring the substantial overlap between STS and EE, then offer a set of goals for STS education at the precollege level. In the final paper, Hungerford presents his General Teaching Model, a K-adult model that he and his students have developed and refined over a 20-year period — a masterful document.

This is a book that belongs in the library of anyone who is serious about EE. It presents some of the most significant papers written since the beginning of the EE movement and offers some of the best thinking by some of the most competent scholars and researchers in the business. Some might criticize this volume because of the significant amount of emphasis placed on one school of thought, but although there are certainly other models for EE, none of them, to my knowledge (and I have been in the business for more than 30 years) are so thoroughly thought out, researched, and documented as this one. Hungerford et al. have been instrumental, perhaps the major force, in moving EE to the status of a true academically respected discipline. Although other approaches exist, I don't know of any that come close to match-

ing the rigor and high standards of scholarship that are associated with this school of thought. This is not to say that only the Hungerford model is worthy of use in the field of EE. It is, indeed, only one of several models. But it is a most compelling and powerful one. Kudos to the authors of each of the excellent papers in this volume and especially to the editors for such excellent choices. This is an important contribution to the field.

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