

INTERNATIONAL HANDBOOK OF RESEARCH ON ENVIRONMENTAL EDUCATION

The environment and contested notions of sustainability are increasingly topics of public interest, political debate, and legislation across the world. Environmental education journals now publish research from a wide variety of methodological traditions that show linkages between the environment, health, development, and education. The growth in scholarship makes this an opportune time to review and synthesize the knowledge base of the environmental education (EE) field.

The purpose of this 51-chapter handbook is not only to illuminate the most important concepts, findings, and theories that have been developed by EE research, but also to examine critically the historical progression of the field, its current debates and controversies, what is still missing from the EE research agenda, and where that agenda might be headed.

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INTERNATIONAL HANDBOOK OF RESEARCH ON ENVIRONMENTAL EDUCATION

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This handbook is dedicated to the pioneers in the field of environmental education who had the foresight that education and learning are crucial in finding pathways that allow humanity to live on this planet in an equitable and just way without compromising its carrying capacity while maintaining the integrity of all species.

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Foreword

This significant, informative, and engaging book on research in environmental education is being published at a critical time in U.S. history. It is a time when competing ideas and perspectives about how to respond to questions and concerns about the environment are hotly debated and often ridiculed. These competing and contentious ideas make it difficult to identify the research, innovations, and programs that can be used to create a sustainable environment and prevent further damage to it. The field of environmental education is an appropriate focal point for many of the concerns that are being raised about the environment. This *Handbook* will be instrumental in identifying what is known in environmental education research. It will also help researchers identify questions that need to be answered as issues ranging from climate change and its effect on biodiversity to nature conservation are widely discussed.

The editors of the *International Handbook of Research on Environmental Education* have collected in a single volume a wealth of information including statistics, analyses, and studies that describe the role that research can play in helping educators, researchers, policy makers, and students better understand the environmental issues that people around the world are confronting. This *Handbook* will be a particularly important resource for the research community and those trying to comprehend and to advance research on environmental education. Information that will help graduate students craft thoughtful and insightful research questions as well as information about research methods and techniques are interspersed throughout this *Handbook*. In addition, the *Handbook* provides a framework and a knowledge base for decision makers who need to make informed and thoughtful decisions about environmental education issues, and educators who need to make curricular decisions about what students need to know and understand about the environment.

The 51 chapters in this *Handbook* include a mix of established and new voices in environmental education research. They include scholars from six continents and 15 countries. These myriad voices created a *Handbook* that is, as the editors point out, “attentive to the diverse populations served by contemporary educational systems as well as to opportunities to engage individuals and communities in nonformal and informal learning contexts.” The *Handbook*’s chapters

are grouped into nine sections. Each section addresses important dimensions of environmental education research, ranging from its historical and theoretical foundations to issues related to gender, race, and colonialism. In addition to chapters that establish the knowledge base in environmental education, the *Handbook* also includes chapters that discuss ethics, the politics of sustainability, environmental justice, and other topics that link research in environmental education to the work being done by scholars in contiguous fields. The result is a volume that encompasses new and divergent perspectives and insights on environmental education issues and research.

The AERA Handbook Series in Education Research was designed and implemented by the AERA Books Editorial Board. When the proposal for the *International Handbook of Research on Environmental Education* was approved for inclusion in the series, the members of the board were Robert E. Floden, Patrick B. Forsyth, Felice J. Levine, Gary J. Natriello, Carol Camp Yeakey, myself, and Robert J. Sternberg, who chaired the publications committee. The board now consists of D. Jean Clandinin, Gilberto Q. Conchas, Robert E. Floden, Mary M. Juzwik, Felice J. Levine, Simon W. Marginson, Mariana Souto-Manning, Olga M. Welch, and myself.

The Handbook Series is part of a comprehensive AERA books publication program that aims to publish works that advance knowledge, expand access to significant research and research analyses and syntheses, and promote knowledge utilization. The series specifically seeks to publish volumes of excellence that are conceptually and substantively distinct. The volumes in the series “offer state-of-the-art knowledge and the foundation to advance research to scholars and students in education research and related social science fields.” When the Books Editorial Board issued its call for proposals for handbooks in education research, the editors of the *International Handbook of Research on Environmental Education* were among the first to respond. Their proposal was accepted after a substantive review and a revision process directed by the Books Editorial Board.

The following criteria outlined in guidelines for preparing handbook proposals were used to review the proposal for the *International Handbook of Research on Environmental Education*. First and foremost, the board examined

the proposed *Handbook* in terms of whether it would provide an opportunity for readers to take stock of and advance their thinking about current and future directions of environmental education research. Second, the board focused on the extent to which the proposed *Handbook* would draw on the strongest research—including research both within and outside the United States. Third, the board was interested in the ability of the editors of the proposed *Handbook* to bring together a team of authors who could assess the knowledge base of environmental education research and do so with respect to the diverse populations served by contemporary educational systems. Finally, the board reviewed the proposed content of the *Handbook* to get a sense of the book's scope and the extent to which it would include a "critical analysis of the strengths and limitations of extant studies as well as address the essential tools and elements for research progress."

At the end of the review process, the board enthusiastically approved and moved the *International Handbook of Research on Environmental Education* into development. Support was given to the editors during the manuscript development process, and when the manuscript was

complete, it was reviewed and approved for publication by the board. We are very pleased to make this comprehensive, well-conceptualized, and theoretically strong *Handbook* available to readers interested in research on environmental education. It advances both theory and practice in the field of environmental education and will help strengthen the quality of environmental education research as well as help educators better understand, identify, and design and implement curriculum on environmental issues.

On behalf of the AERA Books Editorial Board, I want to thank editors Robert B. Stevenson, Michael Brody, Justin Dillon, and Arjen E.J. Wals for their substantial investment in this research *Handbook* and for producing a timely and significant volume. Special thanks is also due to Todd Reitzel who worked closely with the board and the editors in bringing this *Handbook* to fruition. Finally I wish to thank the many authors and reviewers for their important contributions to this important publication.

Cherry A. McGee Banks
Chair, AERA Books Editorial Board
University of Washington Bothell

Acknowledgments

This first AERA *International Handbook of Research on Environmental Education* represents the collective endeavors of countless individuals. The credit for what you hold in your hands or see on your screen is shared by authors, section editors, critical friends, the broader (and wonderfully diverse) community of scholars within the field of environmental education, and colleagues at the American Educational Research Association and Routledge.

The book has its roots in what is now called the Environmental Education (EE) Special Interest Group of the American Educational Research Association (AERA) but which began life in the early 1990s as the Ecological and Environmental Education SIG. This group has grown to be one of the strongest SIGs in AERA and continues to provide a social and intellectual home for researchers in environmental education. We acknowledge the leadership of that group over the past two and a half decades.

The strength of the EE SIG encouraged Felice Levine, AERA's Executive Director, and the AERA Books Editorial Board to invite a contribution to their education research handbook series. It has to be said that this was some years ago and the book has taken a long time to emerge. Without their initial invitation and their unstinting support, this book would be nothing but an idea in a few people's heads.

The length of time from invitation to delivery partly represents the fact that there was an extensive process of consultation and collaboration with many environmental education scholars across the world. As we spell out in the Introduction, we held a series of meetings to discuss the structure and the content of the *Handbook* at two AERA annual meetings, at the research symposium of the

North American Association for Environmental Education, at the World Environmental Education Congress in South Africa, and at the Invitational Seminar on Research and Development in Environmental and Health Education in Switzerland. These meetings were characterized by thoughtful dialogue, critical insight, and a depth of unbridled collegiality which has supported us through the development of the *Handbook*.

From the dialogue and discussion emerged an open call for authors. Gradually a sense of order and cohesion emerged and, together with a devoted and determined group of section editors, the long process of writing, critique, editing, and pulling together led to this, the first ever AERA *International Handbook of Research on Environmental Education*.

To all those who helped us with the planning, who submitted ideas and abstracts, who wrote the chapters, who reviewed submissions and edited the sections, and who took the final drafts and turned them into something beyond words, we offer our unconditional thanks. To those who supported us through this process emotionally, we offer our unconditional love.

As coeditors we take responsibility for the errors and biases that you might find within the nine sections and more than 50 chapters. We have done our best and trust that future editors, authors, and publishers will build on the foundations that this volume represents.

Robert B. Stevenson
Michael Brody
Justin Dillon
Arjen E.J. Wals