

Engaging Environmental Education: Learning, Culture and Agency

Robert B. Stevenson and Justin Dillon (Eds.)



SensePublishers

BIOGRAPHIES

Editor Biographies

Justin Dillon is Professor of Science and Environmental Education and Head of the Science and Technology Education Group at King's College London. After teaching in London schools for 10 years, he joined the staff at King's to work on the National Environmental Database project, in 1989. Justin has researched and published widely in both science and environmental education and he recently directed the "Border Crossings" research project. Justin was elected President of the European Science Education Research Association (ESERA) in 2007. He is a trustee of Sustainability and Environmental Education and has been Chair of both the London Wildlife Trust and the London Environmental Education Forum and is currently Secretary of the Bankside Open Spaces Trust. As well as being an editor of the *International Journal of Science Education*, he is on the editorial board of *Environmental Education Research*, the *Journal of Environmental Education* and several other science and environmental education journals.

Robert (Bob) Stevenson is Research Professor in the School of Education and the Cairns Institute at James Cook University in Queensland, Australia. He was previously on the faculty (and a former Chair) of the Department of Educational Leadership and Policy at the University at Buffalo, USA. Before moving to the United States in 1983, he was a K-12 environmental education curriculum specialist in the Queensland Department of Education, and was involved in co-founding the Australian Association of Environmental Education and the *Australian Journal of Environmental Education* (AJEE). He is a co-executive editor of the *Journal of Environmental Education* and serves on the editorial boards of AJEE, the *Canadian Journal of Environmental Education*, and *Environmental Education Research*. Among his co-edited books is *Education and Sustainability: Responding to the global challenge* (IUCN, 2002). In addition to environmental education, his research interests focus on educational action research, and teacher and school administrators' use of research.

Contributing Author Biographies

Natasha Blanchet-Cohen is an assistant professor in the Department of Applied Human Sciences in community development at Concordia University in Montreal, Canada. Her research spans a wide range of community and social topics in Canada and abroad, including issues around children's rights and sustainability, child agency, the creation of child-youth friendly cities, engagement of Indigenous youth in health, opportunities for social inclusion, the practice and promotion of environmental education, bridge-building across cultures and practices, and developmental approaches to monitoring and evaluation.

BIOGRAPHIES

Monica Carlsson is a an associate professor at the Department of Curriculum Research and a member of the Research Programme for Environmental and Health Education - both at the Danish School of Education (DUE), University of Aarhus. She co-ordinates and teaches on DUE's MEd programme in Health Promotion and Education, and teaches educational evaluation on several other Master programmes at DUE. Her research interests focus on curriculum analysis and evaluation of educational approaches within health education and environmental education, based on the concepts of action-competence, pupil participation and school-community collaboration.

Charlotte Clark is a Visiting Assistant Professor in the Nicholas School of the Environment at Duke University, North Carolina, U.S.A. She earned a Bachelor of Science in biology in 1979, a Masters of Environmental Management in 1983, and a PhD in environmental management in 2007, all from Duke. Her primary area of interest is environmental education, specifically in the area of decision-making by the general public on issues of environmentally-related behavior. She studies how informal learning processes engage with behavior change for individuals and communities around environmental issues. Her professional experience also includes directing Duke's Center for Environmental Education and conducting air pollution regulatory work under contract to the U.S. Environmental Protection Agency.

Leesa Fawcett is an Associate Professor in the Faculty of Environmental Studies, York University and Coordinator of the graduate Diploma in Environmental and Sustainability Education. Her research and teaching interests include feminist environmental education, animal studies, and environmental philosophy. She loves learning and teaching with students in the intersections between nature, technology and popular culture. She has co-authored two books and numerous articles.

Paul Hart is a Professor of Science and Environmental Education at the University of Regina, Canada where he teaches both undergraduate and graduate students. He has published widely in the areas of science and environmental education. He is an Executive Editor of the *Journal of Environmental Education* and a Consulting Editor for other journals including *Environmental Education Research* and the *Canadian Journal of Environmental Education*. His research interests include the genealogical roots of teacher's thinking, children's ideas about the environment, and connections between environmental education and social learning.

Seyoung Hwang is postdoctoral scholar at University of Sussex, UK. She completed her Ph.D. at University of Bath in 2008 (Thesis Title: Teachers' stories of environmental education: blurred boundaries of professionalism, identity and curriculum; available at: www.bath.ac.uk/cree/Seyoung.htm). She is currently working on a two year research project concerning stem cell research and bioethics. Her research interest includes teaching and learning in the context of socially controversial scientific issues, narrative inquiry and environmental identity.

BIOGRAPHIES

Elin Kelsey is an adjunct professor of Environmental Education and Communications at Royal Roads University in Canada. Her research interests focus on public engagement in environmental and conservation/sustainability initiatives and the roles of informal learning organizations. She currently serves as a member of the International Consultative Group of Experts on Biological Diversity Education and Public Awareness for the UN Convention on Biological Diversity. She is the award-winning author of ten books and works with a range of international, national and local organizations to communicate and evaluate environment and sustainability projects. *The Science Case* she wrote for the Pew Environment Group's Global Ocean Legacy Program was instrumental in the 2009 establishment of the world's largest marine reserve in the Pacific Ocean.

Jeppe Læssøe is a professor affiliated with the Research Programme for Environmental and Health Education at Danish School of Education, University of Aarhus. He has an MA in psychology and a PhD in communication studies. He has been involved in a range of interdisciplinary research projects and evaluations, including: a) the history, knowledge interests and strategies of the environmental movement, b) participatory and action oriented adult education related to risk issues and local sustainable development, and c) the socio-cultural dynamics behind changes in modern everyday life and material consumption. His research focus during recent years has been on the strategies, roles and competences of professional mediators.

Cecilia Lundholm is a researcher in the Department of Education, where she is a member of the Conceptual Development research group (ped.su.se/rcd), and at the Stockholm Resilience Centre, Stockholm University. Lundholm's research interests concerns communication and learning about environmental and sustainability issues. Projects on students' learning are being carried out in Sweden and China, addressing learning of natural as well as societal phenomena (as in economics). As part of the new national Graduate School in Education for Sustainable Development a project is under way focusing the teaching and learning of interdisciplinary environmental education in upper secondary school.

Marcia McKenzie is an Assistant Professor in Social Justice and Education in the Department of Educational Foundations, College of Education with a joint appointment in the interdisciplinary School of Environment and Sustainability at the University of Saskatchewan in Saskatoon, Canada. Her research interests centre on education and socio-cultural practice, youth agency and activism, and the politics of social science research. Marcia's current research includes a collaborative project entitled, Discursive Approaches to Teaching and Learning about Social and Ecological Issues, and she is co-editor of the book *Fields of Green: Restorying Culture, Environment, and Education* (Hampton, 2009).

Jutta Nikel is a research fellow in Education at the University of Education in Freiburg, Germany. She currently working on a three year research project on the processes of influence of transnational organisations' agendas on national education

BIOGRAPHIES

systems and coordinating a doctoral research programme on “Developing skills for experimentation in school science and mathematics. Her research interests include conceptual frameworks for sustainable development, quality in education and ascribing responsibility in diverse contexts such as Europe and Sub-Saharan Africa. Jutta finished her Ph.D. at the University of Bath, UK, in 2005.

Leonore Noorduyn is a Dutch journalist with a passion for capturing the essence of what goes on in people’s minds in a way that touches the reader. Since 1998 she has her own company ‘De Schrijfster’ (www.deschrijfster.nl). Her company also organizes trainings and workshops for those who wish to become journalists themselves.

Benjamin A. Pozos-Hernandez has obtained a biology degree and a master in science degree in environmental resources. He has not obtained a Ph.D. degree, yet. He has 9 years experience working as environmental consultant (ISO 14001, environmental impact assessment and environmental planning). He also worked for the Natural History Museum in Mexico City, where he discovered his passion for education and environmental education (EE). He developed EE projects in urban solid waste management and for a natural reserve in the West coast of Mexico. He developed and evaluated learning tools (e.g., simulation-games), as well as EE courses and workshops for teachers and lecturers.

Alan Reid is a senior lecturer in education and member of the Centre for Research in Education and the Environment, University of Bath. He is the editor of *Environmental Education Research*, and coordinates doctoral programmes in research methods in education and management, and teaches on Masters programmes in environmental education, technologies and learning, and qualitative research approaches. His research interests focus on teachers’ thinking and practice in environmental education, and policy-related and philosophical issues in environmental education theory, research and practice. Recent publications include, with Jensen, Nikel and Simovska (eds) (2008) *Participation and Learning: Perspectives on Education and the environment, health and sustainability* (Springer), and with Scott (eds) (2008) *Researching education and the environment: retrospect and prospect* (Taylor & Francis).

Mark Rickinson is an independent educational research consultant, who specialises in research and evaluation, research reviews and research training (www.markrickinson.co.uk). He has recently completed a book with Cecilia Lundholm and Nick Hopwood on *Environmental Learning: Insights from research into the student experience* (2009, Springer Press). Mark is also a Visiting Research Fellow at Oxford University Department of Education and the Policy Studies Institute, London.

Constance Russell is an Associate Professor and Chair of Graduate Studies and Research in Education in the Faculty of Education at Lakehead University in Thunder Bay, Canada where she teaches outdoor education, critical pedagogy and

BIOGRAPHIES

research methods. Broadly speaking, her research focuses on critical environmental education, human/animal relations, and interdisciplinary and academic/activist collaboration. She is co-editor of the *Canadian Journal of Environmental Education* and co-editor of a forthcoming book, *Companion to Research in Education* (Sage).

Carolyn Stirling is a Pākehā scholar from Aotearoa/New Zealand. She is a PhD candidate at the University at Buffalo, USA where her dissertation research, “The Politics of Decolonizing Education in Settler Societies,” is examining the ways non-Indigenous and Indigenous peoples are using decolonization to resist colonization. Her research interests center on the politics of settlement and the issues that arise from the continuation of colonization in contemporary societies, the rejection of Indigenous sovereignty and attempts by settlers to address the harm done by colonization. Stirling holds a MEd from Te Uru Māraurau, Massey University, New Zealand (2007).

Martin Storksdieck is Director of the Board on Science Education at the U.S. National Academy of Sciences where he oversees studies that address a wide range of issues related to science education. He also serves as a fellow at the Institute for Learning Innovation (ILI) where he directs ongoing research studies on science learning in immersive environments; models of involving researchers and scientists in science museums and science centers; and understanding the impact of science hobbyists, such as amateur astronomers, on the public understanding of science. He previously served as Director of Project Development and senior researcher at ILI, was a science educator with a planetarium in Germany, and worked on local environmental management systems for the International Council for Local Environmental Initiatives. He holds a Masters in Biology from the Albert-Ludwigs University (Freiburg, Germany), a Masters in Public Administration from Harvard University, and a Ph.D. in education from Leuphana University (Lüneburg, Germany).

Cathlyn D. Stylinski is a tenured faculty member at the University of Maryland Center for Environmental Science with a focus on science education programs for K-12 and public audiences. She is involved in teacher education, curriculum development, media production, and education research and evaluation. Her research interests include media impacts on public audiences; teacher professional development and changes in classroom practices; geospatial visualization and analysis tools to support learning; the relationship between children and nature; and public participation in science research. She holds a Ph.D. in ecology, M.S. in biology, and B.S. in television and radio production and has also conducted environmental science research and worked in broadcast television.

Kelly Teamey is a lecturer in Education at the University of Bath. Her research interests include organisational learning and change, literacy in developing country and contexts and the policy, methodological and pedagogical issues associated with

BIOGRAPHIES

these. Her recent research was in the ESRC-funded project on Non-Governmental Public Action that focused on partnership dynamics of NGOs and governments working together to provide education, sanitation and health services in India, Bangladesh and Pakistan. Kelly finished her Ph.D. at King's College London in the School of Education in 2006.

Nora Timmerman is a PhD student in the Faculty of Education, University of British Columbia studying the concept and practice of ecological justice and how it can be employed through holistic pedagogy within higher educational settings. Having most recently taken on one of life's most educational endeavors, motherhood, Nora thoroughly enjoys the challenge and wonder of coming to know the world anew alongside her child.

Arjen E.J. Wals is a Professor of Social Learning and Sustainable Development. He is also a UNESCO Chair in the same field. He works within the Education & Competence Studies Group of the Department of Social Sciences of the Wageningen University in The Netherlands. His PhD - obtained in 1991 from the University of Michigan in Ann Arbor, U.S.A. - explored the crossroads between environmental education and environmental psychology. He has (co)published and (co) edited over 150 articles, chapters, books and professional publications on topics such as: action research and community problem-solving, whole school approaches to sustainability, biodiversity education, sustainability in higher education, and, more recently, social and societal learning in the context of sustainability.

INDEX

- Action 40, 50–53, 65, 73, 101, 108, 132, 230
environmental 31–33, 41, 43, 46, 50
political 137, 153, 155
reasons for 44
strategic 31, 35, 43–44, 46, 48, 50
'Take Action' exhibit 102–103
- Action competence 94, 113, 124, 231
- Action research 34, 203–206, 232, 239
community 33
participatory 160, 202–205, 210
- Adolescence 32, 51
- Agency 230–233
- American Educational Research Association (AERA) 3, 4, 100, 102, 174
- Environmental and Ecological Education-Special Interest Group 173
- An Inconvenient Truth 137, 142
- Argumentation 100, 101
- Behaviour, 33, 38, 39, 48–49, 52, 77, 78, 83, 84, 86–89, 93, 115, 122, 123, 202,
and action 32
media influence on 138–139
- Belief, in capacity 40–41
- Biodiversity 61, 62, 208, 228
- Café Scientifiques 100
- Caring for the Earth Charter 228
- Childhood 33
memories of 32, 38
- Class 34, 79, 152–155, 157, 170
- Co-facilitated community learning,
see Learning
- Communities of practice 123–124, 149, 153, 183, 211, 221, 223
- Confidence 40, 41, 179, 189
- Connectedness 35–37, 50, 52, 62
- Constitutional rules 78, 79
- Controversial environmental issues 14, 16, 101
- Conversation 6, 100, 103, 131, 174
- Creative profile 45–47
- Creativity 35, 37, 45–47, 201
- Cultural Historical Activity Theory (CHAT) 221–222, 226
- Curriculum 14–16, 25, 26, 52, 106, 179, 199, 205–208, 211, 212
developers 26
- Dana Centre 100
- Decade of Education for Sustainable Development 13
- Dialogue events 99–100
- Doctoral students 7, 15, 170–172, 175, 178–189
- Dutch Ministry of Environment, Housing and Spatial Planning 59
- Ecology 15, 16, 21, 24, 26, 181
- Ecological literacy 52
- Education for Sustainable Development (ESD) 3, 13, 125, 168, 172–174, 187, 192, 197, 200, 201, 213n5, 223
- Endangered species 37–38
- Energy use 61–62, 80, 138
- Environmental agency rainbow framework 35–44
- Environmental literacy 142
- Exploratory talk 100–102
- Facebook 134, 153
- Foucault, Michel 106

INDEX

- Frankfurt School 202
Freire, Paolo 203
- Geography, school subject 14–15, 23
Giddens, Anthony 106
- Indigenous
knowledge 200, 206, 208,
people 14, 18, 26, 206
- Informal science institutions (ISI) 5, 99
- International Children's
Environment Conference (ICEC) 31, 34
- Internet 38, 44, 47, 51, 131, 141, 147,
impact on public understanding 133
- Kaptein, Marleen 60
- Mini-scripts 102–107
Monterey Bay Aquarium Seafood Watch 101, 103
- Neighborhood design principles 63–64
- Participation 3, 6, 32, 50, 60, 63, 66, 68, 99, 100, 107, 111–126, 152, 169, 221, 222, 227, 228, 231, 235
- Place 18, 33, 60, 82, 100, 116, 141, 147, 168, 208, 220
- Poetry 18–19, 45, 151, 156, 157
- Public, knowledge of science and environmental topics 131
- Public Understanding of Science 6, 132–134,
deficit model implicit in 99, 131
- Questioning, by children 39–40, 44, 50, 52
- Rainbow framework, *see*
Environmental agency rainbow framework
- Research-as-pedagogy 212–213
- Self-efficacy 53, 168
- Sense of place, *see* Place
- Significant Life Experience (SLE)
research 32, 34, 38, 51
- Spiritual experiences 32, 45, 46, 51, 172
- Students
emotional response to lesson content 17, 19–21, 25–26
perspectives on classrooms 14, 18–25
values 18–21, 25–27
views of curriculum 26
- Sustainable
development 6, 13, 51, 111–126, 187, 197, 200, 201, 211, 213, 219, 223, 228, 231, 234
Education 13
lifestyle 75, 157, 229, 233
- Sustainability 5, 26, 59–75, 79, 81, 99, 200, 213n3, 213n5, 219, 223–230
challenge of 24
civic engagement in 5, 60, 72, 225
of neighborhoods 61, 73, 235
- 'Take Action' exhibition, *see* Action
- Teachers
engaging with environmental issues 52–53
facilitating identity development in students 40
in changing circumstances 72
perspectives on classrooms 14, 21
role in fostering engagement 45

INDEX

- thinking about their practice 179–180
- understanding of the purpose of education 197
- undertaking environmental audits 209
- use of argumentation strategies 101
- UN Convention on the Rights of the Child 32
- University
 - courses 15, 26
 - research 199–200
 - students' learning 4, 13, 15–16, 22–23
- YouTube 134, 152, 158