CONTENTS

List of figures xi
List of tables xii
List of boxes xiv
List of contributors xv
Acknowledgements xxiii

Introduction 1

PART 1
Education for sustainable development in higher education 9

1 Education for sustainable development and sustainability science: re-purposing higher education and research 11
   Yoko Mochizuki and Masaru Yarime

2 Learning for walking the change: eco-social innovation through sustainability-oriented higher education 25
   Arjen E.J. Wals, Valentina C. Tassone, Gary P. Hampson and Jonathan Reams

3 Policy, politics and polity in higher education for sustainable development 40
   Gerd Michelsen

4 Challenges for implementation of education for sustainable development in higher education institutions 56
   Ian Thomas
Contents

5 Liturgy and glass ceiling in the process of strengthening the sustainability in institutions of higher education: a perspective from Ibero-America
   Edgar J. González-Gaudiano, Pablo Á. Meira-Cartea and Cynthia N. Martínez-Fernández

PART 2
Paradigms and methodologies of research on higher education for sustainable development

6 Understanding approaches to ESD research on teaching and learning in higher education
   Stephen Sterling, Paul Warwick and Lynne Wyness

7 State of the art in research on higher education for sustainable development
   Matthias Barth and Marco Rieckmann

8 Ongoing and future directions of research on higher education for sustainable development
   Steve Gough, Meyrav Mor, Anna Sowter and Paul Vare

9 Case study research on higher education for sustainable development: epistemological foundation and quality challenges
   Regula Kyburz-Graber

10 Synthesis of research in higher education for sustainable development
   Mark Rickinson and Alan Reid

11 Changing from within: an Action Research perspective for bringing about sustainability curriculum change in higher education
   Fiona Wahr and Barbara de la Harpe

12 Gender and diversity in research on higher education for sustainable development
   Angela Franz-Balsen

13 Postcolonial perspectives in research on higher education for sustainable development
   Vanessa de Oliveira Andreotti

14 A review of three generations of critical theory: towards conceptualising critical HESD research
   Heila Lotz-Sisitka
Contents

15 Evaluation and education for sustainable development: navigating a shifting landscape in regional centres of expertise 223
Rob O'Donoghue

PART 3
Issues and themes of research on higher education for sustainable development 239

16 Operationalising competencies in higher education for sustainable development 241
Arnim Wiek, Michael J. Bernstein, Rider W. Foley, Matthew Cohen, Nigel Forrest, Christopher Kuzdas, Braden Kay and Lauren Withycombe Keeler

17 Individual change: researching educational outcomes achieved by higher education for sustainable development 261
Kerry Shephard

18 Student engagement and leadership in higher education for sustainability 273
Daniella Tilbury

19 Towards a scholarship of curriculum change: from isolated innovation to transformation 287
Kathryn Hegarty and Sarah Holdsworth

20 Organisational change and organisational learning for promoting higher education for sustainable development 301
Paul Sylvestre and Tarah Wright

21 Higher education for sustainable development in the community and through partnerships 315
Debra Rowe and Krista Hiser

22 Sustainability assessment in higher education institutions: what and how? 331
Christian Rammel, Luis Velázquez and Clemens Mader

PART 4
Examples of research on higher education for sustainable development 347

23 Sustainable behaviour in higher education institutions: an exploratory approach 349
Margarita Juárez-Nájera
Contents

   Jorge Megid Neto and Juliana Rink

25 Social representation of sustainable development models in students at a Mexican public university 371
   Antonio Fernández-Crispín and David Lara-González

26 The research process of understanding biographical learning processes of sustainability entrepreneurs 383
   Jana Timm

27 Academics’ opinions and practices of education for sustainable development: reflections on a nation-wide, mixed-methods, multidisciplinary study 396
   Belinda Christie and Kelly Miller

28 Students’ competency development in the context of self-organised and project-oriented sustainability seminars: research at the interface between self-description and real-life action 411
   Mandy Singer-Brodowski

29 Towards critique: exploring the politics and praxis of sustainable higher education change from a discursive-praxeological perspective 421
   Susanne Müller-Lindeque

30 Competencies for sustainability in the curricula of all new degrees from the University of Valencia (Spain) 434
   Pilar Aznar, M. Angeles Ull, Albert Piñero and M. Pilar Martínez-Agut

31 Implementing education for sustainability in higher education through student-centred pedagogies 445
   Neus (Snowy) Evans

Index 462