Contents

1 Situating Socio-scientific Issues in Classrooms as a Means of Achieving Goals of Science Education .............................................. 1
   Troy D. Sadler

2 Enhancing the Authenticity of a Web-Based Module for Teaching Simple Inheritance ............................................................ 11
   Tali Tal, Yael Kali, Stella Magid, and Jacqueline J. Madhok

3 Metalogue: Using Issues and Participatory Experiences to Enhance Student Learning and Interest ........................................... 39
   Siu Ling Wong, Tali Tal, and Troy D. Sadler

4 Learning Science Content and Socio-scientific Reasoning Through Classroom Explorations of Global Climate Change ...................... 45
   Troy D. Sadler, Michelle L. Klosterman, and Mustafa S. Topcu

5 Metalogue: Issues in the Conceptualization of Research Constructs and Design for SSI Related Work ........................................ 79
   Troy D. Sadler, Vaille M. Dawson, Michelle L. Klosterman, Jennifer L. Eastwood, and Dana L. Zeidler

6 Effects of an Interdisciplinary Program on Students’ Reasoning with Socioscientific Issues and Perceptions of Their Learning Experiences .......................................................... 89
   Jennifer L. Eastwood, Whitney M. Schlegel, and Kristin L. Cook

7 Metalogue: SSI in Undergraduate Science Education .................... 127
   Jennifer L. Eastwood, Troy D. Sadler, and María Pilar Jiménez-Aleixandre
8 Discussing a Socioscientific Issue in a Primary School Classroom: The Case of Using a Technology-Supported Environment in Formal and Nonformal Settings

Maria Evagorou

9 Metalogue: Assessment, Audience, and Authenticity for Teaching SSI and Argumentation

Maria Evagorou, Troy D. Sadler, and Tali (Revital) Tal

10 Decision Making and Use of Evidence in a Socio-scientific Problem on Air Quality

Shirley Simon and Ruth Amos

11 Metalogue: Engaging Students in Scientific and Socio-scientific Argumentation

Victor Sampson, Shirley Simon, Ruth Amos, and Maria Evagorou

12 Different Music to the Same Score: Teaching About Genes, Environment, and Human Performances

Blanca Puig and María Pilar Jiménez-Aleixandre

13 Metalogue: Design and Enactment of SSI Curriculum: Critical Theory, Difficult Content, and Didactic Transposition

Timothy Barko, Shirley Simon, María Pilar Jiménez-Aleixandre, and Troy D. Sadler

14 Learning Nature of Science Through Socioscientific Issues

Siu Ling Wong, Zhihong Wan, and Maurice Man Wai Cheng

15 Metalogue: Preconditions and Resources for Productive Socio-scientific Issues Teaching and Learning

Siu Ling Wong, Dana L. Zeidler, and Michelle L. Klosterman

16 Enacting a Socioscientific Issues Classroom: Transformative Transformations

Dana L. Zeidler, Scott M. Applebaum, and Troy D. Sadler

17 Metalogue: Balancing Tensions Associated with Extensive Enactment of SSI-Based Teaching

Dana L. Zeidler, Randy L. Bell, Troy D. Sadler, and Jennifer L. Eastwood
Contents

18 A Case Study of the Impact of Introducing Socio-scientific Issues into a Reproduction Unit in a Catholic Girls’ School.......................... 313
Vaille M. Dawson

19 Metalogue: Critical Issues in Teaching Socio-scientific Issues........... 347
Jennie S. Brotman, Vaille M. Dawson, and Felicia Moore Mensah

20 Socio-scientific Issues-Based Education: What We Know About Science Education in the Context of SSI .............................. 355
Troy D. Sadler

Index................................................................................................................. 371
Socio-scientific Issues in the Classroom
Teaching, Learning and Research
Sadler, T.D. (Ed.)
2011, XXIV, 376 p., Hardcover
ISBN: 978-94-007-1158-7