Contents

1 Learning to Solve Problems in the Digital Age: Introduction . . . . 1
J. Michael Spector and Kinshuk

Part I Instructional Design Perspectives

2 Investigating an Online Museum’s Information System . . . . . 11
Asmidah Alwi and Elspeth McKay

3 MAPLET – A Framework for Matching Aims, Processes,
Learner Expertise and Technologies . . . . . . . . . . . . . . . . . 23
Maree Gosper

4 Web-Based Learning Objects in School Education . . . . . . . . 37
Said Hadjerrouit

5 KM and WEB 2.0 Methods for Project-Based Learning . . . . . 49
Christine Michel and Élise Lavoué

Part II Cognitive Perspectives

6 Semandix: Constructing a Knowledge Base
According to a Text Comprehension Model . . . . . . . . . . . . . 67
Panagiotis Blitsas, Maria Grigoriadou, and Christos Mitsis

7 First-Person Education and the Biofunctional Nature
of Knowing, Understanding, and Affect . . . . . . . . . . . . . . . 89
Asghar Iran-Nejad and William Stewart

8 Socio-cognitive Regulation Strategies in Cooperative
Learning Tasks in Virtual Contexts . . . . . . . . . . . . . . . . . . 111
Denisse Margoth López-Benavides
and Ibis Marlene Alvarez-Valdivia

9 Collaborative Cognitive Tools for Shared Representations . . . . 127
Jukka Orava and Pasi Silander
Part III  Assessment Perspectives

10 Automating the Measurement of Critical Thinking for Individuals Participating in Discussion Forums  .......... 143
   Stephen Corich, Kinshuk, and Lynn Jeffrey

11 Alternative Assessment Strategies for Complex Problem Solving in Game-Based Learning Environments .......... 159
   Deniz Eseryel, Dirk Ifenthaler, and Xun Ge

12 Concept Map Based Intelligent Knowledge Assessment System: Experience of Development and Practical Use ........ 179
   Janis Grundspenkis

13 Technologies to Support the Assessment of Complex Learning in Capstone Units: Two Case Studies .......... 199
   Margot McNeill

14 Text-Guided Automated Self Assessment ..................... 217
   Pablo Pirnay-Dummer and Dirk Ifenthaler

Part IV  Schooling and Teaching Perspectives

15 Comparing the Impact of Electronic Performance Support and Web-Based Training ..................................... 229
   James D. Klein and Frank Nguyen

16 Moving Beyond Teaching and Learning into a Human Development Paradigm ........................................... 243
   Sandra Reeb-Gruber, Michael K. McCuddy, Xavier Parisot, and David Rossi

17 Leaders for the Twenty-First Century: Preparation, Experiences, and Roles in Technology Implementation .......... 259
   Lynne Schrum, Lyndsie M. Galizio, Mary C. English, and Patrick Ledesma

18 Pedagogy and Content Knowledge Based Podcasting Project for Preservice Teachers ..................... 273
   Junko Yamamoto

Part V  Virtual Environments Perspectives

19 Simulation-Games as a Learning Experience: An Analysis of Learning Style and Attitude ..................... 291
   Janet Lynn Sutherland and Knut Ekker

20 Implementation of an Online Social Annotation Tool in a College English Course ............................. 313
   Anne Mendenhall, Chanmin Kim, and Tristan E. Johnson


21  Self-Direction Indicators for Evaluating the Design-Based Elearning Course with Social Software ........................................... 325
     Kai Pata and Sonja Merisalo

22  Employing Virtual Collaborative Exchanges to Expand Global Awareness ................................................................. 343
     Sandra Poindexter, Ray Amtmann, and Tawni Ferrarini

23  Ideas and Concepts of ViCaDiS – A Virtual Learning Environment for Digital Students .............................................. 359
     Radu Vasiu and Diana Andone

Index ........................................................................................................................................................................... 377
Multiple Perspectives on Problem Solving and Learning in the Digital Age
Ilfenthaler, D.; Spector, M.; Kinshuk; Isaias, P.; Sampson, D.G. (Eds.)
2011, XIX, 398 p., Hardcover
ISBN: 978-1-4419-7611-6