## Contents

1. **Roadmap for Adaptive and Personalized Learning in Ubiquitous Environments** ............................................. 1  
   Kinshuk

2. **Learning and Teaching with Social Media** .................. 15  
   Jon Dron and Terry Anderson

3. **Causal Models and Big Data Learning Analytics** ............. 31  
   Vivekanandan Suresh Kumar, Kinshuk, Clayton Clemens and Steven Harris

4. **The Effect of Story in Mobile Educational Game** ............. 55  
   Chris Lu, Maiga Chang, Kinshuk, Echo Huang and Ching-Wen Chen

5. **Adaptive and Personalized Learning Based on Students’ Cognitive Characteristics** ............................... 77  
   Ting-Wen Chang, Jeffrey Kurcz, Moushir M. El-Bishouty, Kinshuk and Sabine Graf

6. **Augmentation Strategies for Paper-Based Content Integrated with Digital Learning Supports Using Smartphones** ................. 99  
   Nian-Shing Chen, I-Chun Hung and Wei-Chieh Fang

7. **Semantic Analysis-Enhanced Natural Language Interaction in Ubiquitous Learning** ................................. 119  
   Dunwei Wen, Yan Gao and Guangbing Yang

8. **Big Data Learning Analytics: A New Perspective** ............. 139  
   Vivekanandan Suresh Kumar, Kinshuk, Thamarai Selvi Somasundaram, David Boulanger, Jérémie Seanosky and Marcello F. Vilela
9 Recommendation Systems for Personalized Technology-Enhanced Learning ............................................. 159
Mohamed Koutheïr Khribi, Mohamed Jemni and Olfa Nasraoui

10 Use of Dashboards and Visualization Techniques to Support Teacher Decision Making ....................... 181
Alex Mottus, Kinshuk, Sabine Graf and Nian-Shing Chen

11 National Palace Museum Adventure—A Mobile Educational Role-Playing Game for Museum Learning ........... 201
Chun Chang, Maiga Chang and Jia-Sheng Heh

12 Teaching Improvement Technologies for Adaptive and Personalized Learning Environments ..................... 225
Moushir M. El-Bishouty, Kevin Saito, Tingwen Chang, Kinshuk and Sabine Graf

13 Improving Learner Experience in the Technology Rich Classrooms ....................................................... 243
Ronghuai Huang, Yongbin Hu and Junfeng Yang
Ubiquitous Learning Environments and Technologies
Kinshuk; Huang, R. (Eds.)
2015, X, 258 p. 82 illus., 70 illus. in color., Hardcover
ISBN: 978-3-662-44658-4