# Contents

## Part I  ICT in Education

1. **An Instructional-Learning Model Applying Problem-Based Learning Enabled by ICTs**
   Vassilios Makrakis and Nelly Kostoulas-Makrakis
   
2. **ICT and Collaborative Creativity in Modern School Towards Knowledge Society**
   Panagiotes Anastasiades
   
3. **Contextualized Educators’ Training: The Case of Digital Storytelling**
   Tharrenos Bratitsis

## Part II  ICT in Preschool and Primary Education

4. **Investigating Young Children’s Engagement with Computer Use as a School Activity: A Pilot Study**
   Kleopatra Nikolopoulou and Vasilis Gialamas
   
5. **Using a Research-Based Learning Environment’s Appropriation, as the Context for a Professional Development Intervention in ICT Integration in the Classroom**
   Vassilis Kollias, Athanasios Davaris, Apostolos Daropoulos and Konstantinos Zaganas
   
6. **Evaluating the Use of Laptop Computers in Secondary Education in Greece: Findings from a National Survey of Teachers**
   Aristides Vagelatos and Panagiotis Angelopoulos
Part III  ICT in Secondary Education

7  Producing Educational Videos: A Field-Based Implementation with PBL Methodology ............................. 91
Chris Panagiotakopoulos, Anthi Karatrantou and Menelaos Sarris

8  Fostering Students’ Understanding with Web-Based Simulations in an Inquiry Continuum Framework ............. 105
Apostolos Michaloudis and Euripides Hatzikraniotis

9  How Personalization May Benefit the Learning Design Process with LAMS ........................................... 119
Eva Papazoi, Kyparisia A. Papanikolaou, Evangelia Gouli and Maria Grigoriadou

Part IV  e-Learning in Higher Education

10  The Design, Implementation, and Evaluation of a Two-Layer Peer-Assessment Scheme in an Undergraduate Course Wiki: Findings from a Case Study .............................. 133
Ilias Karasavvidis

11  Gamification and Game Mechanics-Based e-Learning: A Moodle Implementation and Its Effect on User Engagement .................. 147
Evaggelos Katsigiannakis and Charalampos Karagiannidis

12  Investigating the Role of Structure in Online Teachers’ Communities of Learning ....................................... 161
Panagiotis Tsiotakis and Athanassios Jimoyiannis

Part V  e-Learning for Educators

13  Online Learning and Self-Regulation: Balancing Between Personal and Social Dimensions .......................... 177
Panos Vlachopoulos and Maria Hatzigianni

14  Development of a Blended Learning Program and Its Pilot Implementation for Professional Development of Science Teachers ......................................................... 189
Dimitris Psillos

Part VI  Teachers’ Views Towards ICT

15  Factors Affecting Greek Kindergarten Teachers to Support or Oppose ICT in Education .......................... 203
Nicholas Zaranis, Vassilios Oikonomidis and Michalis Linardakis
16 Differences in Attitudes Towards ICT in Education Between Freshmen and Senior Students of Department of Primary Education in Greece ................................... 217
Ioannis Vourletsis and Panagiotis Politis

17 Teachers’ Views of Technological Pedagogical Content Knowledge: The Case of Compulsory Education Science in-Service Teachers ................................... 231
Dimitris Psillos and Apostolos Paraskevas

Part VII ICT for Specialized Uses

18 The Use of Information and Communication Technologies for Inclusive Education in Greece ................................... 243
Maria Gelastopoulou and Vassilis Kourbetis

19 Dyslexia in Primary School: A New Platform for Identifying Reading Errors and Improving Reading Skills ................. 257
Eleni Chanioti

Part VIII European Education Policy and ICT

Evaggelia Kalerante and Theodoros Eleftherakis

21 Teachers’ Professional Development in the Theme of Competence-Based Learning—Impact and Lessons Learnt .......... 283
Katerina Riviou and Sofoklis Sotiriou

Index ................................................................. 299
Research on e-Learning and ICT in Education
Technological, Pedagogical and Instructional Perspectives
Anastasiades, P.; Zaranis, N. (Eds.)
2017, XXIII, 301 p. 58 illus., 46 illus. in color., Hardcover
ISBN: 978-3-319-34125-5