# Table of Contents

Foreword .......................................................................................................................................... xviii

Preface ................................................................................................................................................. xx

Acknowledgment ...............................................................................................................................xxii

## Section 1

### Online and Blended Learning

**Chapter 1**
A Blended Learning Course for Teachers’ Ongoing Professional Development in Greece ............... 1  
Charalambos Mouzakis, National and Kapodistrian University of Athens, Greece  
Constantions Bourletidis, National and Kapodistrian University of Athens, Greece

**Chapter 2**
Integrating K-12 Hybrid Online Learning Activities in Teacher Education Programs: Reflections from the School of Rock Expedition ................................................................. 25  
Matt Niemitz, Adobe Systems Inc., USA  
Scott Slough, Texas A&M University, USA  
Kristen St. John, James Madison University, USA  
R. Mark Leckie, University of Massachusetts - Amherst, USA  
Leslie Peart, Consortium for Ocean Leadership, USA  
Ann Klaus, Texas A&M University, USA

**Chapter 3**
Faculty Reflections on Decision-Making and Pedagogical Use of Online Activities in Teacher Education ................................................................................................................................. 44  
Swapna Kumar, University of Florida, USA

**Chapter 4**
Peer to Peer: Using the Electronic Discussion Board During Student Teaching .................................. 60  
Karen J. Johnson, West Chester University, USA
Section 2
Communication and Collaboration

Chapter 5
Technology Perception Framework for Education Faculties
Hasan Tinmaz, Educational Technologist, Turkey
İlker Yakin, Middle East Technical University, Turkey

Chapter 6
Using Free Source ePortfolios to Empower ESL Teachers in Collaborative Peer Reflection
Adrian Ting, Hong Kong Institute of Education, Hong Kong
Phillip David Jones, Hong Kong Institute of Education, Hong Kong

Chapter 7
Using VoiceThread to Increase Teacher Candidates’ Reflection and Global Implications for Usage
Virginia McCormack, Ohio Dominican University, USA

Chapter 8
The Golden Apple: A Quest toward Achievement
Lesia Lennex, Morehead State University, USA
Kimberely Fletcher Nettleton, Morehead State University, USA

Section 3
Social and Affective Issues

Chapter 9
Technology to Enhance the Affective Learning Outcomes of Teacher Trainees
Nor Aziah Alias, Universiti Teknologi MARA, Malaysia
Nor Aiza Alias, Kepong Secondary School, Malaysia

Chapter 10
From Online Role-Play to Written Augmentation: Using Blended Learning in Lessons on Social Issues
Kati Vapalahti, University of Jyväskylä, Finland
Miika Marttunen, University of Jyväskylä, Finland
Leena Laurinen, University of Jyväskylä, Finland

Chapter 11
Women and Technology, Upon Reflection: Linking Global Women’s Issues to the Digital Gender Divide in Urban Social Studies Education
Judith Cramer, Columbia University, USA
Margaret Smith Crocco, Columbia University, USA
Section 4
Subject-Specific Teacher Education

Chapter 12
Preparing Qualified Elementary School Teachers: Connecting Mathematics and Science by
Integrating Data Collection Technology into Methods Courses ......................................................... 203
   Irina Lyublinskaya, College of Staten Island / CUNY, USA
   Nelly Tournaki, College of Staten Island / CUNY, USA

Chapter 13
Collaborative Learning in Pre-Service /In-Service Communities of Practice: Discovering How
and When to Integrate Technology in Senior High Science ............................................................... 228
   Ronald J. MacDonald, University of Prince Edward Island, Canada

Chapter 14
Fostering Educational Technology Integration in Science Teacher Education: Issues of
Teacher Identity Development ............................................................................................................ 245
   Brenda M. Capobianco, Purdue University, USA
   James D. Lehman, Purdue University, USA

Chapter 15
Pre-Service Elementary Teachers’ Evaluations of Technology Tools for Mathematical Learning:
A Reflective Model ............................................................................................................................. 258
   Christopher J. Johnston, George Mason University, USA

Chapter 16
Reflections on a Course Designed to Encourage Technology Integration in Secondary
School Mathematics ............................................................................................................................ 277
   Gladis Kersaint, University of South Florida, USA

Chapter 17
A Mathematical Problem-Solving Approach to Identify and Explore Instructional Routes Based
on the Use of Computational Tools ..................................................................................................... 295
   Manuel Santos-Trigo, Center for Research and Advanced Studies, Cinvestav-IPN, Mexico

Chapter 18
Web 2.0 Tools in Social Studies Methods ........................................................................................... 312
   Adam M. Friedman, Wake Forest University, USA
   Tina L. Heafner, University of North Carolina at Charlotte, USA
Section 5
Framework and Application: Learning Environment of Digital Age

Chapter 19
Increasing Teacher Candidates’ Reflection with Technology ................................................. 332
Chinwe H. Ikpeze, St. John Fisher College, USA

Chapter 20
The Professional Handbook: Developing Professionalism and Reflective Skills while
Connecting Theory and Practice through Technology.......................................................... 347
Sara Winstead Fry, Boise State University, USA

Chapter 21
Game-Based Learning: A Strategy to Integrate Digital Games in Schools .......................... 365
Begoña Gros, Universitat Oberta de Catalunya, Spain

Chapter 22
Teacher Candidates Learning through the Creation of Podcasts ........................................ 380
Christian Penny, West Chester University of Pennsylvania, USA

Chapter 23
Annotation Practices with Pen-Based Technologies............................................................. 398
Kevin J. Reins, The University of South Dakota, USA

Compilation of References .................................................................................................. 418

About the Contributors ....................................................................................................... 463

Index ..................................................................................................................................... 473