# Table of Contents

Foreword ........................................................................................................................................... xiv
Preface ................................................................................................................................................ xvi
Acknowledgment .............................................................................................................................. xxii

## Section I

### E-Learning Technologies, Strategies, and Methodologies

#### Chapter I
Educational Technologies and the Emergence of E-Learning 2.0 .................................................. 1

Panagiotis D. Siozos, Aristotle University of Thessaloniki, Greece
George E. Palaigeorgiou, Aristotle University of Thessaloniki, Greece

#### Chapter II
Basic Aspects of VLEs and Guidelines for Supporting Learning Communities and E-Collaboration ............................................. 18

Thrasyvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece
Eleftheria Giannaka, University of Patras, Greece

#### Chapter III
Open and Distance Learning Tools and Strategies .......................................................... 34

Cristina Girona, Universitat Oberta de Catalunya, Spain

#### Chapter IV
Teaching and Learning in Virtual Environments .......................................................... 48

Joan Campas, Universitat Oberta de Catalunya, Spain

#### Chapter V
Evaluation Models for E-Learning: Experiences in Teaching Archaeology ............................... 64

César Carreras, Universitat Oberta de Catalunya, Spain
Section II
Spatial-Computational Technologies and Virtual Reality Reconstructions in Archaeology

Chapter VI
From Observation to Interpretation ................................................................. 79
  Cynthia Jaulneau, Archaeologist, France

Chapter VII
Databases for Multiple Archaeological Excavations and Internet Applications .......... 104
  Athanasios Karamalis, Computer Scientist and Researcher, Germany

Chapter VIII
Geographical Information Systems (GIS) and Learning Applications in Archaeology ........ 128
  Dimitrios Margounakis, Computer Scientist and Researcher, Greece

Chapter IX
Virtual Reconstructions in Archaeology .......................................................... 146
  Dimitrios Margounakis, Computer Scientist and Researcher, Greece

Chapter X
The Use of Virtual Museums, Simulations, and Recreations as Educational Tools .......... 157
  Dionysios Politis, Aristotle University of Thessaloniki, Greece
  Ioannis Marras, Aristotle University of Thessaloniki, Greece

Chapter XI
Social Modeler: The Use of Expert Systems in Archaeology ..................................... 199
  Panagiotis Linardis, Aristotle University of Thessaloniki, Greece

Chapter XII
Machine Translation Systems ............................................................................. 211
  Athanasios Tryferidis, Electrical and Computer Engineer; MLS SA, Greece
  Theofanis Korlos, Aristotle University of Thessaloniki, Greece

Section III
Electronic Publishing and Copyright Protection over Archaeological Computer Networks

Chapter XIII
Legal Issues of Electronic Publishing in Virtual Environments ................................. 221
  Ioannis Iglezakis, Aristotle University of Thessaloniki, Greece
Chapter XIV
Drama-Merdžumekja: A Southeast Bulgarian Monument of the European Culture Heritage and Its Publication ................................................................. 229

Rudolf Echt, University of Saarland, Germany

Chapter XV
Posting Articles about Excavations in Electronic Forums ................................................ 254

Charilaos Thomos, Computer Scientist and Researcher, Greece
Alexandros Gouniotis, Computer Scientist and Researcher, Greece
Konstantinos Kechagias, School of Second Chance, Greece

Section IV
Selected Readings

Chapter XVI
Communication Barriers and Conflicts in Cross-Cultural E-Learning ............................... 276

Rita Zaltsman, International Center of Modern Education - Prague, Czech Republic

Chapter XVII
Multimedia, Cognitive Load and Pedagogy ....................................................................... 289

Peter E. Doolittle, Virginia Polytechnic Institute & State University, USA
Andrea L. McNeill, Virginia Polytechnic Institute & State University, USA
Krista P. Terry, Radford University, USA
Stephanie B. Scheer, University of Virginia, USA

Chapter XVIII
Knowledge Through Evolution .............................................................................................. 311

Russell Beale, University of Birmingham, UK
Andy Pryke, University of Birmingham, UK

Chapter XIX
Collaborative Geographic Information Systems: Origins, Boundaries, and Structures ........... 325

Shivanand Balram, Simon Fraser University, Canada
Suzana Dragicevic, Simon Fraser University, Canada

Chapter XX
Towards an Ontology for Information Systems Development: A Contextual Approach ........ 342

Mauri Leppänen, University of Jyväskylä, Finland
Chapter XXI
Personalization Issues for Science Museum Web Sites and E-Learning ........................................... 371
Silvia Filippini-Fantoni, The University of Paris I Sorbonne University, France
Jonathan P. Bowen, London South Bank University, UK
Teresa Numerico, London South Bank University, UK

Chapter XXII
A Virtual Museum Where Students can Learn ................................................................. 388
Nicoletta Di Blas, Politecnico di Milano, Italy
Paolo Paolini, Politecnico di Milano, Italy
Caterina Poggi, Politecnico di Milano, Italy

Chapter XXIII
Enhancing Learning Through 3-D Virtual Environments ................................................. 407
Erik Champion, School of ITEE, University of Queensland, Australia

Compilation of References .............................................................................................................. 423

About the Contributors ................................................................................................................... 459

Index........................................................................................................................................... 463