# Table of Contents

Foreword ............................................................................................................................................ xxii

Preface .............................................................................................................................................. xxvi

Acknowledgment .............................................................................................................................. xxxi

## Section 1

### Digital Natives

**Chapter 1**

Native or Novice? An Exploratory Study of the Access to and Use of Digital Technologies among Pathway Students ....................................................................................................................... 1

_Donna M. Velliaris, Eynesbury Institute of Business & Technology, Australia_  
_Paul Breen, University of Westminster, UK_

**Chapter 2**

Turning Digital Natives from Consumers of Digital Products to Producers of Knowledge............... 21

_Antonios S. Andreatos, Hellenic Air Force Academy, Greece_

**Chapter 3**

Profiling Internet Use of Portuguese Higher Education Students.................................................. 46

_Rita Santos, University of Aveiro, Portugal_  
_José Azevedo, University of Porto, Portugal_

**Chapter 4**

Social Space or Pedagogic Powerhouse: Do Digital Natives Appreciate the Potential of Web 2.0 Technologies for Learning? ................................................................. 72

_Stephen M. Rutherford, Cardiff University, UK_  
_Henrietta J. Standley, Cardiff University, UK_

**Chapter 5**

Strategies to Reduce Attrition among First Year Computer Science Students ............................ 98

_Juris Borzovs, University of Latvia, Latvia_  
_Laila Niedrite, University of Latvia, Latvia_  
_Darja Solodovnikova, University of Latvia, Latvia_
Chapter 6
Assessment ‘for’ Learning: Embedding Digital Literacy and Peer-Support of Learning into an Assessment

Steph M. Rutherford, Cardiff University, UK
Zoë C. Prytherch, Cardiff University, UK

Chapter 7
Model for Identifying Competencies and Learning Outcomes (MICRA)

Maria José Angélico Gonçalves, Polytechnic of Porto/ISCAP/CICE, CEPESE, Portugal
Álvaro Rocha, University of Coimbra, Portugal
Manuel Pérez Cota, University of Vigo, Spain
Pedro Pimenta, University of Minho, Portugal

Section 2
Strategies of Teaching and Learning

Chapter 8
Competences and Learning Profiles of Digital Age’s Students

Ana Loureiro, Polytechnic Institute of Santarém, Portugal & University of Aveiro, Portugal
Inês Messias, Universidade Aberta, Portugal

Chapter 9
Digital Natives in Online Learning Environments: New Bottle Old Wine – The Design of Online Learning Environments for Today’s Generation

Hatice Gökçe Bilgiç, Yıldırım Beyazıt University, Turkey
Dilek Doğan, Ankara University, Turkey
Süleyman Sadi Seferoğlu, Hacettepe University, Turkey

Chapter 10
Framework for Non-Invasive Learning Experience Management in Third Millennium Higher Education Ecosystems

Farid Mokhtar Noriega, Camilo Jose Cela University, Spain

Chapter 11
Advances in Anatomical and Medical Visualisation

Paul Michael Rea, University Of Glasgow, UK

Chapter 12
Learning Management System 2.0: Higher Education

Muhammad Anshari, Universiti Brunei Darussalam, Brunei
Yabit Alas, Universiti Brunei Darussalam, Brunei
Nor’Azmah Hj Mohd Yunus, Universiti Brunei Darussalam, Brunei
Norakmarul Ihsan binti Pg Hj Sabtu, Universiti Brunei Darussalam, Brunei
Malai Hayati Sheikh Abdul Hamid, Universiti Brunei Darussalam, Brunei
Mark Smith, Universiti Brunei Darussalam, Brunei
Chapter 13
Researching the Use of Communication Technologies in Higher Education Institutions in Portugal
João Batista, University of Aveiro, Portugal
Salomé Morais, Polytechnic Institute of Viseu, Portugal
Fernando Ramos, University of Aveiro, Portugal

Chapter 14
Using the WebQuest Approach to Elicit Student Engagement in a University Course: A Case Study
Stephen Asunka, Ghana Technology University College, Ghana

Section 3
Virtual Education

Chapter 15
Tips Towards Tackling Distance Education Modules: The Case of the Doctoral Program on Multimedia in Education
Lúcia Pombo, University of Aveiro, Portugal
António Moreira, University of Aveiro, Portugal

Chapter 16
Master in Innovative Tourism Development: A Blended Learning Experience in the Polytechnic Institute of Viana do Castelo
Sandra Vieira Vasconcelos, Polytechnic Institute of Viana do Castelo, Portugal
Ana Balula, University of Aveiro, Portugal
Pedro Almeida, University of Aveiro, Portugal

Chapter 17
The Problems and Support Services in Web-Based Distance Education: Expectations in Support Services
Fahriye Altunay Aksal, Near East University, Turkish Republic of Northern Cyprus
Zehra Altunay Gazi, Near East University, Turkish Republic of Northern Cyprus
Ayhan Sari, Karadeniz Technical University, Turkey
Muhammet Berigiel, Karadeniz Technical University, Turkey
Bülent Gürsel Emiroğlu, Kirikkale University, Turkey

Chapter 18
Web-Based Course Design Models
Murat Çınar, Hacettepe University, Turkey
Hakan Tüzün, Hacettepe University, Turkey
Chapter 19
Towards a Model of a Didactics of eLearning: An Application to Education for Sustainable Development ................................................................. 396
Filomena Amador, Universidade Aberta, Portugal
Ana Nobre, Universidade Aberta, Portugal
Daniela Barros, Universidade Aberta, Portugal

Chapter 20
Motivational Active Learning in Blended and Virtual Learning Scenarios: Engaging Students in Digital Learning .................................................................................. 416
Johanna Pirker, Graz University of Technology, Austria
Maria Riffnaller-Schiefer, Graz University of Technology, Austria
Lisa Maria Tomes, Graz University of Technology, Austria
Christian Gütl, Graz University of Technology, Austria & Curtin University, Australia

Compilation of References ................................................................................................................................. 438

About the Contributors ................................................................................................................................. 487

Index ........................................................................................................................................................ 497