E-Infrastructures and Technologies for Lifelong Learning: Next Generation Environments

George D. Magoulas (Birkbeck College, University of London, UK)

The emerging knowledge society places new requirements on the educational sector to support the needs of individuals and organizations. In the discipline of lifelong learning, which is one of the most important forces driving education in the 21st century, e-learning has become a collaborative and community-based process. This necessitates tools to support the autonomous and dynamic creation of lifelong learning communities and new distributed e-learning services.

E-Infrastructures and Technologies for Lifelong Learning: Next Generation Environments provides a comprehensive review of state-of-the-art technologies for e-learning and lifelong learning, examining theoretical approaches, models, architectures, systems, and applications. It addresses critical issues in the field, providing readers with insight on the various stages of the technological life cycle, as well as applications in real-world settings. As a one-stop reference, this book provides a holistic view of the various issues in the area of advanced technologies for lifelong learning ranging from organizational issues to lifelong learning delivery issues.

Topics Covered:
- Adult learning
- Digital literacy
- E-learning development and design
- Game-based learning
- Online course development
- Personalized learning
- Social media
- Ubiquitous learning
- Virtual worlds
- Web 2.0 for lifelong learning

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

George Magoulas is Professor of Computer Science and Director of Postgraduate Studies at the Department of Computer Science and Information Systems, Birkbeck College, University of London. He is also a member of the London Knowledge Lab (www.lkl.ac.uk). The main thrust of his work is in the development of intelligent techniques for learner modelling and personalized learning environments. He was an invited speaker at the Adaptive Hypermedia and Adaptive Web-Based Systems 2003 (AH2003), part of the 9th International Conference on User Modeling (UM’2003), and keynote speaker at the International e-Learning Forum 2007, Tokyo, Japan. He has secured 1.2m+ GBP funding from UK funding agencies as Principal Investigator or co-Investigator of research and development projects that have attracted a total of 3.5m+ GBP in competitive external funding. Within these and other projects he has worked closely with partners active in various areas of information technology, Technology Enhanced Learning (TEL) and lifelong learning, and was involved in collaborations with public bodies, such as the Linking London Lifelong Learning Network, the UCAS and the learndirect. He was co-editor of the books: Adaptable and Adaptive Hypermedia Systems (2005) and Advances in Web-based Education: Personalized Learning Environments (2006). George is currently working with practising teachers to research, and co-construct, an interactive Learning Design Support Environment (LDSE) to scaffold teachers’ decision-making from basic planning to creative TEL design. He is leading the research on the intelligent components of the LDSE and the design and implementation of the interactive environment. Through an iterative research-design process the LDSE team hopes to address some important challenges in the area of learning design and build the means by which the teaching community can collaborate further on how best to deploy TEL.
Section 1: Systems, Models and Architectures

Chapter 1
Techniques, Technologies and Patents Related to Intelligent Educational Systems
Prentzas Jim (Democritus University of Thrace, Greece)
Hatzilygeroudis Ioannis (University of Patras, Greece)

Chapter 2
A General Framework for Inclusive Lifelong Learning in Higher Education Institutions with Adaptive Web-Based Services that support Standards
Santos Olga C. (DeNu Research Group, Computer Science School, UNED, Spain)
Boticanos Jesus G. (DeNu Research Group, Computer Science School, UNED, Spain)

Chapter 3
Diplek:
Rodolfothenos C. T. (University of Patras, Greece)
Kameas A. D. (Hellenic Open University, Greece)
Pintelas P. E. (University of Patras, Greece)

Chapter 4
Social, Personalized Lifelong Learning
Cristea Alexandra (University of Warwick, UK)
Ghali Fawaz (University of Warwick, UK)
Joy Mike (University of Warwick, UK)

Chapter 5
Mash-Up Personal Learning Environments
Wild Fridolin (Open University, UK)
Modritschek Felix (Vienna University of Economics and Business, Austria)
Siguropoulos Steinn (Open University, The Netherlands)

Chapter 6
Technological Evaluation and Optimization of E-Learning Systems Components
Karlovkas Eugenijus (Institute of Mathematics and Informatics, Lithuania)
Dagile Valentina (Institute of Mathematics and Informatics, Lithuania)

Section 2: Managing Digital Educational Content and Resources

Chapter 7
Collaborative Development of Educational Modules
Barbosa Ellen Francine (University of São Paulo – ICMC/USP, Brazil)
Maldonado José Carlos (University of São Paulo – ICMC/USP, Brazil)

Chapter 8
Collaborative Learning Design within Open Source E-Learning Systems:
Kordaki Maria (Patras University, Greece)
Siempos Haris (Patras University, Greece)
Dartadoimis Thanas (Open University of Catalonia, Spain)

Section 3: Developing and Accrediting Skills and Competences

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Building Bridges:
Birnholtz Jeremy (Cornell University, USA & University of Toronto, Canada)
Baecker Ron (University of Toronto, Canada)
Laughton Simone (University of Toronto at Mississauga, Canada)
Mak Clarissa (University of Toronto, Canada)
Cauacey Rhy (University of Toronto, Canada)
Rankin Kelly (University of Toronto, Canada)

Chapter 10
Video-Lectures over Internet:
Ronchetti Marco (Università degli Studi di Trento, Italy)

Chapter 11
Adaptive Sequencing of Information for Lifelong Learners
Guiterrez Santos Sergio (London Knowledge Lab, Birkbeck College, UK)

Section 3: Developing and Accrediting Skills and Competences

Chapter 12
Learning, Unlearning, and Relearning:
Dunlap Joanna C. (University of Colorado Denver, USA)
Lowenthal Patrick R. (University of Colorado Denver, USA)

Chapter 13
Technological Aids to the Efficient Assessment of Prior Learning:
Van der Klink Marcel (Open University of the Netherlands, The Netherlands)
Kicken Wendy (Open University of the Netherlands, The Netherlands)
Skeep Peter B. (Open University of the Netherlands, The Netherlands)

Chapter 14
Game Based Lifelong Learning
Kelle Sebastian (Open University of The Netherlands, The Netherlands)
Siguropoulos Steinn E. (Open University of The Netherlands, The Netherlands)
Western Wim (Open University of The Netherlands, The Netherlands)
Specht Marcas (Open University of The Netherlands, The Netherlands)

Chapter 15
Formative Assessment and Feedback with Teacher Immediacy Behaviors in an E-Text-Based Context
Chang Ni (Indiana University South Bend, USA)

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