Cognitive and Emotional Processes in Web-Based Education: Integrating Human Factors and Personalization

Edited by: Constantinos Mourlas, Nikos Tsianos, and Panagiotis Germanakos, National & Kapodistrian University of Athens, Greece

568 pages; 2009 Copyright
Price: US $195.00 (hardcover*)
Perpetual Access: US $295.00
Print + Perpetual Access: US $390.00
Illustrations: figures, tables (8 1/2” x 11”)
Translation Rights: World
*Paperback is not available.

A preliminary classification of individual characteristics that affect the outcome of learning procedures is the distinction between cognitive and emotional parameters. This covers a wide spectrum of human factors and comprises a very important research area in Web-based learning.

Cognitive and Emotional Processes in Web-Based Education: Integrating Human Factors and Personalization enhances the effectiveness of Web-based learning by incorporating cognitive and emotional human factors into adaptive hypermedia applications. This book covers a large number of topics in the area of human individuality that will be of importance to researchers, academicians, and practitioners in the areas of e-learning and education.

Subject:
IT Education; Cognitive Informatics; Multimedia Technologies; Human Aspects of Technology

Market:
This essential publication is for all academic and research libraries as well as researchers and professionals who are interested in the areas of IT education and Web-based learning. Academicians, educators, researchers, and experts who are interested in exploring computer-based testing, personalized style in learning, social communication patterns in online learning, and the design of accessible e-learning systems will find this reference unparalleled.

Excellent addition to your library! Recommend to your acquisitions librarian.

www.info-sci-ref.com
Cognitive and Emotional Processes in Web-Based Education: Integrating Human Factors and Personalization

Edited by: Constantinos Mourlas, Nikos Tsianos, and Panagiotis Germanakos, National & Kapodistrian University of Athens, Greece

Table of Contents

Chapter I: Individual Differences and Web-Based Learning
Michael Grimley, University of Canterbury, New Zealand
Richard Riding, University of Birmingham, UK

Chapter II: Personalizing Style in Learning: Activating a Differential Pedagogy
Steve Rayner, University of Gloucestershire, UK

Chapter III: Can Cognitive Style Predict How Individuals use Web-Based Learning Environments?
Martin Graff, University of Glamorgan, UK

Chapter IV: Learning Styles and Design Interactions in Web-Based Education
Michael Workman, Florida Institute of Technology, USA

Chapter V: Integrating Knowledge of Cognitive System and E-Learning Applications
George Spanoudakis, University of Cyprus, Cyprus

Chapter VI: Kyu: Cognitive Models of Working Memory
Zoe Bablekou, Aristotle University of Thessaloniki, Greece

Chapter VII: Affective Issues In Adaptive Educational Environments
Makis Leontidis, University of Athens, Greece
Constantin Halatsis, University of Athens, Greece

Chapter VIII: Understanding Learner Trait, Test and Computer Anxiety in the Context of Computer-Based Testing
Elena C. Papanastasiou, Aristotle University of Thessaloniki, Greece

Chapter IX: Cultural Differences in Adaptive Educational Hypermedia: The Effect of Cognitive Styles and Visual Working Memory
Nikos Tsianos, National & Kapodistrian University of Athens, Greece
Panagiotis Germanakos, National & Kapodistrian University of Athens, Greece
Zacharias Lekkas, National & Kapodistrian University of Athens, Greece
Costas Mourlas, National & Kapodistrian University of Athens, Greece

Chapter X: The DEKOR System: Personalization of Guided Access to Open Repositories
Christian Gütl, Graz University of Technology, Austria
Victor Garcia, Graz University of Technology, Austria

Chapter XI: Diagnosing Students’ Learning Style in an Educational Hypermedia System
Elvira Popescu, University of Craiova, Romania

Chapter XII: Cognitive Learning Approaches to the Design of Accessible e-Learning Systems
Ray Adams, Middlesex University, UK
Andrina Granić, University of Split, Croatia

Chapter XIII: Intelligent Books: Combining Reactive Learning Exercises with Extensible and Adaptive Content in an Open-Access Web Application
William Billingsley, University of Cambridge, UK
Peter Robinson, University of Cambridge, UK

Chapter XIV: Enhancing Individually’s Cognition, Intelligence and Sharing Digital/Web-based Knowledge Using Virtual Reality and Information Visualization Techniques and Tools within K-12 Education and its Impact on Democratizing the Society
Jorge Perreirra Franco, Universidade de São Paulo, Brazil
Irene Karagguilla Ficheman, Universidade de São Paulo, Brazil
Marcelo Knörich Zuffo, Universidade de São Paulo, Brazil
Valéria Venâncio, Universidade de São Paulo, Brazil
Roseli de Deus Lopes, Universidade de São Paulo, Brazil
Marlene Moreno, Secretaria Municipal de Educação de São Paulo - SME, Brazil
Marlene Gomazes da Silva Freitas, Secretaria Municipal de Educação de São Paulo - SME, Brazil
Ana Laiza Bertelli Furtado Leite, Secretaria Municipal de Educação de São Paulo - SME, Brazil
Gláucia Almeida, Secretaria Municipal de Educação de São Paulo - SME, Brazil
Marcos Antonio Matias, Universidade Bandeirante, Brazil
Nilton Ferreira Franco, Universidade Presbiteriana Mackenzie, Brazil

Chapter XV: The Impact of Individual Differences on Social Communication Pattern in Online Learning
Robert Z. Zheng, University of Utah, USA
Jill A. Flyvare, University of Utah, USA
Laura B. Dahl, University of Utah, USA
Richard R. Hoffman, University of Utah, USA

Chapter XVI: Collaborative Learning in a Web-Based Environment: A Comparison Study
Yin Zhang, Kent State University, USA

Chapter XVII: The Effect of Communication Styles on Computer-Supported Collaborative Learning
Hichang Cho, National University of Singapore, Singapore
Geri Gay, Cornell University, USA

Chapter XVIII: Fostering Interactivity Through Formative Peer Assessment in (Web-Based) Collaborative Learning Environments
Jan-Willem Strijbos, Leiden University, The Netherlands
Theresa A. Oeho, Indiana University, USA
Dominique M. A. Sluijsmans, HAN University & Open University of The Netherlands, The Netherlands
Mien S. R. Segers, Leiden University, The Netherlands

Chapter XIX: Supporting Group and Individual Processes In Web-Based Collaborative Learning Environments
F. Pozzi, Tecnologie Didattiche – CNR, Italy

Chapter XX: Employing Innovative Learning Strategies using an E-Learning Platform
Andrina Granić, University of Split, Croatia
Maja Ćukušić, University of Split, Croatia
Aimilia Tzanavari, University of Nicosia, Cyprus

Chapter XXI: Building a b-Learning Strategy
Paula Peres, Institute of Accounting and Administration of Porto (ISCAP), Portugal
Pimenta Pedro, University of Minho, Portugal

About the Editors:
Costas Mourlas is an assistant professor in the National and Kapodistrian University of Athens (Greece), Department of Communication and Media Studies since 2002. He obtained his PhD from the Department of Informatics, University of Athens (1995) and graduated from the University of Crete (1988) with a diploma in computer science. In 1998, he was an ERCIM fellow for post-doctoral studies through research in STFC (UK). He was employed as Lecturer at the University of Cyprus, Department of Computer Science (1999 till 2002). His previous research work focused on distributed multimedia systems with adaptive behaviour, quality of service issues, streaming media and the Internet. His current main research interest is in the Design and the Development of Intelligent environments that provide adaptive and personalized context to the users according to their preferences, cognitive characteristics and emotional state. He has several publications including edited books, chapters, articles in journals and conference proceedings. Dr. C. Mourlas has taught various undergraduate as well as postgraduate courses in the Dept. of Computer Science of the University of Cyprus and the Dept. of Communication and Media Studies of the University of Athens. Furthermore, he has coordinated and actively participated in numerous national and EU funded projects.

Nikos Tsianos is a research assistant and doctoral candidate at the New Technologies Laboratory of the Faculty of Communication and Media Studies of the University of Athens. He holds an Msc in political communication from the University of Athens. His main research area is the incorporation of theories from the Psychology of Individual Differences into Adaptive Educational Hypermedia, the development of corresponding systems and the empirical evaluation of such systems in the context of an experimental psychological methodology. He has published numerous articles in conferences and journals regarding this field of research, while he also participates in a number of national and EU funded projects, including research on locative media and mobile applications.

Panagiotis Germanakos (PhD) is a Research Scientist, in the Laboratory of New Technologies, Faculty of Communication & Media Studies, National & Kapodistrian University of Athens and of the Department of Computer Science, University of Cyprus. He obtained his PhD from the University of Crete (2008) and his MSc in International Marketing Management from the Leeds University Business School (1999). His BSc was in Computer Science and also holds a HND Diploma of Technician Engineer in the field of Computer Studies. His research interest is in Web Adaptation and Personalization Environments and Systems based on user profiling/filters encompassing amongst others visual, mental and affective processes, implemented on desktop and mobile/wireless platforms. He has several publications, including co-edited books, chapters, articles in journals and conference proceedings. Furthermore, he actively participates in numerous national and EU funded projects that mainly focus on the analysis, design and development of open interoperable integrated wireless/mobile and personalized technological infrastructures and systems in the ICT research areas of e-Government, e-Health and e-Learning and has an extensive experience in the provision of consultancy of large-scale IT solutions and implementations in the business sector.

Excellent addition to your library! Recommend to your acquisitions librarian.

www.info-sci-ref.com