This section serves as a foundation for this exhaustive reference tool by addressing crucial theories essential to the fundamental understanding of Virtual Learning Environments. Chapters found within these pages provide an excellent framework in which to position Virtual Learning Environments within the field of information science and technology. Insight regarding the critical incorporation of global measures for bolstering research and development within Virtual Learning Environments are addressed, while crucial stumbling blocks of this field are explored. With 13 chapters comprising this foundational section, the reader can learn and choose from a compendium of expert research on the elemental theories underscoring the Virtual Learning Environments discipline.

Chapter 1.1
Virtual Learning Environment ................................................................. 1
Saša Mladenović, University of Split, Croatia
Haidi Kuvač, University of Split, Croatia
Maja Štula, University of Split, Croatia

Chapter 1.2
Distance Learning Courses: A Survey of Activities and Assignments ......................... 17
Kelley Walters, Northcentral University, USA
Melanie Shaw, Northcentral University, USA
David Long, University of Florida, USA

Chapter 1.3
An Overview of Learning Management Systems ............................................. 33
Anthony A. Piña, Sullivan University System, USA
Chapter 1.4
Blended Learning Revisited: How it Brought Engagement and Interaction into and Beyond the Classroom

Pablo Ortega Gil, University of Alicante, Spain
Francisco Arcos García, University of Alicante, Spain

Chapter 1.5
The Evolution of E-Learning Management Systems: An Ethical Approach

Nuno Sotero Alves da Silva, De Montfort University, UK
Gonçalo Jorge Morais da Costa, De Montfort University, UK
Mary Prior, De Montfort University, UK
Simon Rogerson, De Montfort University, UK

Chapter 1.6
Preparing Faculty for a Learning Management System Transition

Danilo M. Baylen, University of West Georgia, USA
Mary Hancock, University of West Georgia, USA
Carol M. Mullen, University of West Georgia, USA
Mary Angela Coleman, University of West Georgia, USA

Chapter 1.7
Web 2.0 and Professional Development of Academic Staff

Belinda Tynan, University of New England, Australia
Cameron Barnes, University of New England, Australia

Chapter 1.8
Formal and Informal Learning Flows Cohesion in Web 2.0 Environment

Malinka Ivanova, Technical University of Sofia, Bulgaria
Anguelina Popova, University of Utrecht, The Netherlands

Chapter 1.9
Innovative Instructional Strategies with the Use of Technology for Adult Learners

Lesley Farmer, California State University, Long Beach, USA

Chapter 1.10
An Approach for Analysing Interactions within Virtual Learning Communities

Manuela Repetto, Institute for Educational Technology, National Research Council, Italy

Chapter 1.11
Collaborative Learning and Concept Mapping for Language Teaching

Rita de Cássia Veiga Marriott, University of Birmingham, UK

Chapter 1.12
“You Can Lead the Horse to Water, but … ”: Aligning Learning and Teaching in a Web 2.0 Context and Beyond

Henk Huijser, University of Southern Queensland, Australia
Michael Sankey, University of Southern Queensland, Australia
Chapter 1.13
Virtual Learning Environments: Second Life MUVEs to Leverage Student Ownership

Mitzi P. Trahan, University of Louisiana at Lafayette, USA
Nan B. Adams, Southeastern Louisiana University, USA
Susan Dupre, University of Louisiana at Lafayette, USA

Section 2
Development and Design Methodologies

This section provides in-depth coverage of conceptual architecture frameworks to provide the reader with a comprehensive understanding of the emerging developments within the field of Virtual Learning Environments. Research fundamentals imperative to the understanding of developmental processes within Virtual Learning Environments are offered. From broad examinations to specific discussions on methodology, the research found within this section spans the discipline while offering detailed, specific discussions. From basic designs to abstract development, these chapters serve to expand the reaches of development and design technologies within the Virtual Learning Environments field. This section includes 14 contributions from researchers from around the world on the topic of Virtual Learning Environments.

Chapter 2.1
Didactic Design Pattern: Anonymous and Non-Anonymous Feedback

Sven Wippermann, University of Education Ludwigsburg, Germany

Chapter 2.2
Designing for Social Interaction and Social Competence in a 3D-VLE

James Laffey, University of Missouri at Columbia, USA
Matthew Schmidt, University of Missouri at Columbia, USA
Janine Stichter, University of Missouri at Columbia, USA
Carla Schmidt, University of Missouri at Columbia, USA
Danielle Oprean, University of Missouri at Columbia, USA
Melissa Herzog, University of Missouri at Columbia, USA
Ryan Babiuch, University of Missouri at Columbia, USA

Chapter 2.3
Building a Framework for an English Language Course in an LMS with SCORM Compliant Learning Objects and Activities

Francisco Arcos, University of Alicante, Spain
Pablo Ortega, University of Alicante, Spain

Chapter 2.4
Design and Implementation of Multiplatform Mobile-Learning Environment as an Extension of SCORM 2004 Specifications

Kiyoshi Nakabayashi, National Institute of Multimedia Education, Japan
Chapter 2.5
The Recursive Knowledge Development Model for Virtual Environments

Nan B. Adams, Southeastern Louisiana University, USA
Thomas A. DeVaney, Southeastern Louisiana University, USA

Chapter 2.6
Virtual Learning Environment (ClassSim) Examined Under the Frame of Andragogy

Lisa Carrington, University of Wollongong, Australia
Lisa Kervin, University of Wollongong, Australia
Brian Ferry, University of Wollongong, Australia

Chapter 2.7
Objective-Oriented Assessment in Desire2Learn for Quality Matters

Haomin Wang, Dakota State University, USA
Mingming Shao, Dakota State University, USA

Chapter 2.8
Supporting Mobile Access to VLE Resources through MobiGlam

Fatma Meawad, German University in Cairo, Egypt
Geneen Stubbs, University of Glamorgan, UK

Chapter 2.9
MobiGlam: A Framework of Interoperability and Adaptivity for Mobile Learning

Fatma Meawad, German University in Cairo, Egypt
Geneen Stubbs, University of Glamorgan, UK

Chapter 2.10
Integrating Ontology-Based Content Management into a Mobilized Learning Environment

Gábor Kismihók, Corvinus University of Budapest, Hungary
Barna Kovács, Corvinus University of Budapest, Hungary
Réka Vas, Corvinus University of Budapest, Hungary

Chapter 2.11
The Design of Learning Materials within Small Scale Projects: What is the Value of an Action Research Approach?

Michael Hammond, University of Warwick, UK
Jie Hu, University of Chongqing, China

Chapter 2.12
An Architecture for Learning Environments Based on the Lightweight Integration of Intelligent Agents

Sergey Butakov, SolBridge International School of Business, South Korea
Denis Smoline, American University of Nigeria, Nigeria
Nousheen Naimat Samuel, SolBridge International School of Business, South Korea
Naima Naimat Samuel, SolBridge International School of Business, South Korea
Section 3
Tools and Technologies

This section presents an extensive coverage of various tools and technologies available in the field of Virtual Learning Environments that practitioners and academicians alike can utilize to develop different techniques and strategies for new engineering technologies. These chapters enlighten readers about fundamental research on the many methods used to facilitate and enhance the integration of this worldwide phenomenon by exploring the usage of Second Life, ClassSim, and Moodle, to name a few technologies. It is through these rigorously researched chapters that the reader is provided with countless examples of the up-and-coming tools and technologies emerging from the field of Virtual Learning Environments. With 13 chapters, this section offers a broad treatment of some of the many tools and technologies within the Virtual Learning Environments and IT community.

Chapter 3.1
Second Life Brought to Life: A Case of Usability In-World ......................................................... 437
Kevin Yee, University of Central Florida, USA
Jace Hargis, University of the Pacific, USA

Chapter 3.2
Science through Second Life: A Case Study of MUVE’s in an Urban 9th Grade Classroom........... 451
Elizabeth Wellman, Educational Consultant, Los Angeles, USA
Cathy Arreguin, San Diego State University, USA

Chapter 3.3
Supporting Virtual Collaborative Learning using Collaboration Scripts and Content Schemes ....... 470
Birgitta Kopp, Ludwig-Maximilians-University, Germany
Heinz Mandl, Ludwig-Maximilians-University, Germany

Chapter 3.4
CSCL Techniques in Collaborative Virtual Environments: The Case of Second Life .................. 488
Thrasyvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece
Andreas Konstantinidis, Aristotle University of Thessaloniki, Greece
Theodouli Terzidou, Aristotle University of Thessaloniki, Greece
Lazaros Ioannidis, Aristotle University of Thessaloniki, Greece
Chrysanthi Tseloudi, Aristotle University of Thessaloniki, Greece
Chapter 3.5
Using a Process-Aware Information System to Support Collaboration in Mobile Learning Management Systems .......................................................... 505

Roberto Perez-Rodriguez, University of Vigo, Spain
Manuel Caeiro-Rodriguez, University of Vigo, Spain
Luis Anido-Rifon, University of Vigo, Spain

Chapter 3.6
Strategies of LMS Implementation at German Universities ........................................... 522

Carola Kruse, Technische Universität Braunschweig, Germany
Thanh-Thu Phan Tan, Technische Universität Braunschweig, Germany
Arne Koesling, Leibniz Universität Hannover, Germany
Marc Krüger, Leibniz Universität Hannover, Germany

Chapter 3.7
Interoperability Approach in E-Learning Standardization Processes ................................. 542

Carmen Bao, La Rioja University, (UR), Spain
José María Castresana, Basque Country University (UPV/EHU), Spain

Chapter 3.8
Using Moodle to Teach Constructivist Learning Design Skills to Adult Learners .................. 561

Doug L. Holton, Utah State University, USA

Chapter 3.9
Short Message Services for Supporting Student Learning: A Blended Approach .................. 573

Dick Ng’ambi, University of Cape Town, South Africa

Chapter 3.10
ClassSim: An Approach to Educator Development Through a Simulation ......................... 591

Brian Ferry, University of Wollongong, Australia
Lisa Kervin, University of Wollongong, Australia
Lisa Carrington, University of Wollongong, Australia

Volume II

Chapter 3.11
The Utilization of Concept Maps as Knowledge Systematization and Text-Authoring Tools in Collaboration-Based Educational Processes: The LOLA Experiment ................................................................. 606

Patricia Lupion Torres, Pontificia Universidade Católica do Paraná, Brazil
Marcus Vinicius Santos Kucharski, Universidade Tuiuti do Paraná and Pontificia Universidade Católica do Paraná, Brazil
Chapter 3.12
Hybrid Dialog: Dialogic Learning in Large Lecture Classes ................................................................. 623
  Tobias Zimmermann, University of Zurich, Switzerland
  Karen-Lynn Bucher, University of Zurich, Switzerland
  Daniel Hurtado, University of Zurich, Switzerland

Chapter 3.13
An Extendible Simulation Game to Promote Team Spirit on Mobile Computing Devices ............... 641
  Vincent Tam, The University of Hong Kong, Hong Kong
  Zexian Liao, The University of Hong Kong, Hong Kong
  C.H. Leung, The University of Hong Kong, Hong Kong
  Lawrence Yeung, The University of Hong Kong, Hong Kong
  A.C.M. Kwan, The University of Hong Kong, Hong Kong

Section 4
Utilization and Application

This section discusses a variety of applications and opportunities available that can be considered by practitioners in developing viable and effective Virtual Learning Environments prevention programs and processes. This section includes 14 chapters that review topics from Hong Kong, Ireland, Germany, UK, Korea, Spain, Iran, USA, and many more countries, with dozens of institutions and cultures from around the world represented. A variety of chapters discuss Virtual Learning Environments in a wide range of settings (deaf students, writing development, professional development, etc.). Contributions included in this section provide excellent coverage of today’s IT community and how research into Virtual Learning Environments is impacting the social fabric of our present-day global village.

Chapter 4.1
A Case Study of Infusing Web 2.0 Tools for Blended Learning: Virtual Presentations as an Alternative Means of Assessment................................................................. 656
  Yiu Chi Lai, The Hong Kong Institute of Education, Hong Kong
  Eugenia M.W. Ng, The Hong Kong Institute of Education, Hong Kong

Chapter 4.2
Social Orthotics for Youth with ASD to Learn in a Collaborative 3D VLE ........................................ 674
  James Laffey, University of Missouri, USA
  Janine Stichter, University of Missouri, USA
  Matthew Schmidt, University of Missouri, USA

Chapter 4.3
Applying E-Learning Technologies to Library Information Literacy Instruction .............................. 693
  Jamie Ward, Dundalk Institute of Technology Library, Ireland

Chapter 4.4
Effects of Feedback on Learning Strategies in Learning Journals: Learner-Expertise Matters ........... 710
  Julian Roelle, University of Bielefeld, Germany
  Kirsten Berthold, University of Bielefeld, Germany
  Stefan Fries, University of Bielefeld, Germany
Chapter 4.5
Towards Mobile Learning Applications Integration with Learning Management Systems .......... 726
Marc Alier Forment, Universitat Politècnica de Catalunya, Spain
Maria José Casany Guerrero, Universitat Politècnica de Catalunya, Spain
Jordi Piguillem Poch, Universitat Politècnica de Catalunya, Spain

Chapter 4.6
Video-Enriched Learning Experiences for Performing Arts Students: Two Exploratory Case Studies ................................................................................................................................................ 739
Alberto Ramírez Martinell, Lancaster University, UK
Julie-Ann Sime, Lancaster University, UK

Chapter 4.7
Virtual Worlds and Avatars for the Development of Primary Foreign Languages and Primary Foreign Languages for the Development of Real Children ............................................................. 758
Yongho Kim, Korea National University of Education, Republic of Korea

Chapter 4.8
Online Support for Students’ Writing Skills Development in a Technical Communication Introductory Module ............................................................................................................................... 772
Yvonne Cleary, University of Limerick, Ireland

Chapter 4.9
Online Delivery of Deaf Studies Curricula in Ireland at Third Level ...................................................... 786
Brian Nolan, Institute of Technology, Ireland
Lorraine Leeson, Trinity College Dublin, Ireland

Chapter 4.10
Mode Neutral: The Pedagogy that Bridges Web 2.0 and e-Learning 2.0 ....................................................... 803
Brian Smith, Edge Hill University, UK
Peter Reed, Edge Hill University, UK

Chapter 4.11
Integrating New Open Source Assessment Tools into dotLearn LMS .............................................................. 825
Paloma Moreno-Clari, University of Valencia, Spain
Esteban Sanchis-Kilders, University of Valencia, Spain

Chapter 4.12
Teaching Off-Line Digital Video Editing On-Line: An Exploration into Editing and Postproduction Digital Pedagogic Practice .................................................................................................................. 845
Sarah Atkinson, University of Brighton, UK

Chapter 4.13
3D Virtual Learning Environment for Engineering Students ............................................................... 859
M. Valizadeh, University of Guilan, Iran
B. Noroozi, University of Guilan, Iran & University of Cincinnati, USA
G. A. Sorial, University of Cincinnati, USA
Chapter 4.14
Improvement of Engineering Students Education by E-Learning

George A. Sorial, University of Cincinnati, USA
Babak Noroozi, University of Guilan, Iran

Section 5
Organizational and Social Implications

This section includes a wide range of research pertaining to the social and behavioral impact of Virtual Learning Environments around the world. Chapters introducing this section critically analyze and discuss trends in collaborative learning strategies. Additional chapters included in this section look at students’ perspective, race, and benchmarking. Also investigating a concern within the field of Virtual Learning Environments is research that discusses blended learning, with two chapters centrally concerned with this topic. With 14 chapters, the discussions presented in this section offer research on the global Virtual Learning Environments, as well as implementation of ethical considerations for all organizations.

Chapter 5.1
Collaborating to Learn: Designing and Building 3D Immersive Virtual Learning Environments for Exploring STEM Concepts in Middle School

Nita J. Matzen, Appalachian State University, USA
William Edward Roberts, Appalachian State University, USA
Penny Barker, Ashe County Schools, USA
Julie Marklin, Davie County Schools, USA

Chapter 5.2

Andreas Konstantinidis, Aristotle University of Thessaloniki, Greece
Thrasyvoulos Tsiatsos, Aristotle University of Thessaloniki, Greece
Stavros Demetriadis, Aristotle University of Thessaloniki, Greece
Andreas Pomportsis, Aristotle University of Thessaloniki, Greece

Chapter 5.3
The Student Perspective: Can the use of Technologies Transform Learning?

Eileen O’Donnell, Dublin Institute of Technology, Ireland

Chapter 5.4
The Students’ Participation in WebCT: An Activity Theory Perspective on Online Collaboration of Knowledge Construction

Urai Salam, Tanjungpura University, Indonesia

Chapter 5.5
Implementing and Promoting Blended Learning in Higher Education Institutions: Comparing Different Approaches

Lixun Wang, The Hong Kong Institute of Education, Hong Kong
Chapter 5.6
Virtual Learning Environments for Culture and Intercultural Competence ........................................ 966
Amy Ogan, Carnegie Mellon University, USA
H. Chad Lane, University of Southern California, USA

Chapter 5.7
Examining Race Hate Crime with Students using a Cross Cultural International Virtual Learning Environment (VLE) ............................................................................................................. 985
Julian Buchanan, Victoria University of Wellington, New Zealand (formerly of Glyndwr University, Wales)
Steve Wilson, Washington University, USA
Nirmala Gopal, University of KwaZulu-Natal, South Africa

Chapter 5.8
Benchmarking Online Learning Practices in Higher Education: Software Selection, Teacher Preparation, and Course Evaluation .................................................................................................................. 1005
Julie A. Ray, Robert Morris University, USA

Chapter 5.9
Knowledge Access and Interaction Evolution in Virtual Learning Communities .................. 1019
Maria Chiara Caschera, Institute of Research on Population and Social Policies (CNR-IRPPS), Italy
Alessia D’Andrea, Institute of Research on Population and Social Policies (CNR-IRPPS), Italy
Fernando Ferri, Institute of Research on Population and Social Policies (CNR-IRPPS), Italy
Patrizia Grifoni, Institute of Research on Population and Social Policies (CNR-IRPPS), Italy

Chapter 5.10
Collaborative Knowledge Construction in Virtual Learning Environments: A Good Practice Example of Designing Online Courses in Moodle ............................................................. 1039
Kathrin Helling, Institute for Future Studies, Austria
Christian Petter, Institute for Future Studies, Austria

Chapter 5.11
Plagiarism Detection Tools in Learning Management Systems ........................................ 1060
Sergey Butakov, Solbridge International School of Business, South Korea
Vladislav Shcherbinin, American University of Nigeria, Nigeria

Chapter 5.12
E-Learning for ICT Group Work in a Blended Learning Environment .................................. 1079
Lisa Soon, CQUniversity, Australia
Campbell Fraser, Griffith University, Australia
Chapter 5.13
Effects of Virtual World Environments in Student Satisfaction: An Examination of the Role of Architecture in 3D Education ................................................................. 1091
Noha Saleeb, Middlesex University, UK
Georgios Dafoulas, Middlesex University, UK

Chapter 5.14
Individual and Collaborative Approaches in E-Learning Design ........................................ 1110
Abel Usoro, University of the West of Scotland, UK
Grzegorz Majewski, University of the West of Scotland, UK
Len Bloom, University of Botswana, Botswana

Section 6
Managerial Impact

This section presents contemporary coverage of the leadership implications of Virtual Learning Environments, more specifically related to the corporate and managerial utilization of learning management, course management, and professional development applications, and how these technologies can be facilitated within organizations. Core ideas such as world view, human factors, and security and privacy management all pervade the section to give a clearer picture of the impact Virtual Learning Environments has on management styles across different industries.

Chapter 6.1
Using a Learning Management System to Facilitate Learning Outcomes Assessment ............... 1132
Steven F. Tello, University of Massachusetts Lowell, USA
Luvai Motiwalla, University of Massachusetts Lowell, USA

Chapter 6.2
Security and Privacy Management for Learning Management Systems .................................. 1151
Wolfgang Hommel, Leibniz Supercomputing Centre, Germany

Chapter 6.3
Building and Maintaining Human Capital with Learning Management Systems ....................... 1171
Tom Butler, University College Cork, Ireland
Audrey Grace, University College Cork, Ireland

Chapter 6.4
Managing Case-Based Learning with Interactive Case Study Libraries .................................. 1186
Hao Jiang, Pennsylvania State University, USA
John M. Carroll, Pennsylvania State University, USA
Craig Ganoe, Pennsylvania State University, USA
Volume III

Chapter 6.5
Adapting Three-Dimensional-Virtual World to Reach Diverse Learners in an MBA Program .......... 1207
Rosalyn Rufer, State University of New York at Empire State College, USA
Ruifang Hope Adams, State University of New York at Empire State College, USA

Chapter 6.6
Incorporating “World View” into the LMS or CMS is Best ................................................................. 1220
Katherine Watson, Coastline Community College, USA

Chapter 6.7
Understanding Human Factors in Systems Selection and Implementation: Exploring the Role of Power and Politics ........................................................…………………………………….. 1232
Konrad Peszynski, RMIT University, Australia

Chapter 6.8
Mobile Learning Management Systems in Higher Education ............................................................... 1249
Demetrios G. Sampson, University of Piraeus & Informatics and Telematics Institute, Greece
Panagiotis Zervas, University of Piraeus & Informatics and Telematics Institute, Greece

Chapter 6.9
Integrating the LMS in Service Oriented eLearning Systems ............................................................. 1265
José Paulo Leal, CRACS & INESC-Porto LA, Faculdade de Ciências, Universidade do Porto, Portugal
Ricardo Queirós, CRACS & INESC-Porto LA, Faculdade de Ciências, Universidade do Porto, Portugal

Chapter 6.10
Monitoring Students’ Activity and Performance in Online Higher Education: A European Perspective .................................................................................. 1276
Fernando Lera-López, Public University of Navarre, Spain
Javier Faulín, Public University of Navarre, Spain
Angel A. Juan, Open University of Catalonia, Spain
Victor Cavaller, Open University of Catalonia, Spain

Chapter 6.11
An Organizational Knowledge Circulation Management System for Universities ............................. 1294
Toshie Ninomiya, The University of Electro-Communications, Japan
Fumihiko Anma, The University of Electro-Communications, Japan
Toshio Okamoto, The University of Electro-Communications, Japan
Chapter 6.12
Faculty Reflections on Decision-Making and Pedagogical Use of Online Activities in Teacher Education ................................................................. 1305
Swapna Kumar, University of Florida, USA

Chapter 6.13
Analyzing Functionalities of Course Management Systems: A Faculty Perspective ...................... 1321
V. Adlakha, University of Baltimore, USA
A. Aggarwal, University of Baltimore, USA

Chapter 6.14
Effective Design and Delivery of Learning Materials in Learning Management Systems ............... 1341
Mehregan Mahdavi, University of Guilan, Iran
Mohammad H. Khoobkar, Islamic Azad University of Lahijan, Iran

Section 7
Critical Issues

This section contains 13 chapters giving a wide variety of perspectives on Virtual Learning Environments and its implications. Such perspectives include culture, emotion, and disability as they all pertain to virtual learning environments. The section also discusses constructivism as it relates to both synchronous and asynchronous learning environments. Within the chapters, the reader is presented with an in-depth analysis of the most current and relevant issues within this growing field of study. Crucial questions are addressed and alternatives offered, and this section stands as a vital resource for the latest theoretical literature within the field.

Chapter 7.1
But Do They Want Us in “Their” World? Evaluating the Types of Academic Information Students Want through Mobile and Social Media ......................................................... 1353
Tim Brown, University of Central Florida, USA
Amanda Groff, University of Central Florida, USA

Chapter 7.2
Caring in the Zone: Fostering Relationships in Virtual Learning Communities ............................ 1370
Amelia Cheney, Appalachian State University, USA
Peter Nelsen, Appalachian State University, USA

Chapter 7.3
Integrating Culture with E-Learning Management System Design ........................................... 1389
Ray Archee, University of Western Sydney, Australia
Myra Gurney, University of Western Sydney, Australia
Chapter 7.4
Enculturation of the Utilization of Learning Management System: The Experience of Universiti Putra Malaysia ................................................................. 1406

Aida Suraya Md. Yunus, Universiti Putra Malaysia, Malaysia
Hamidah Meseran, Universiti Putra Malaysia, Malaysia
Zaidan Abdul Wahab, Universiti Putra Malaysia, Malaysia

Chapter 7.5
Towards Learning ‘Self’ and Emotional Knowledge in Social and Cultural Human-Agent Interactions ................................................................. 1426

Wan Ching Ho, University of Hertfordshire, UK
Kerstin Dautenhahn, University of Hertfordshire, UK
Meyit Lim, Heriot-Watt University, UK
Sibylle Enz, Otto-Friedrich-Universitaet Bamberg, Germany
Carsten Zoll, Otto-Friedrich-Universitaet Bamberg, Germany
Scott Watson, University of Hertfordshire, UK

Chapter 7.6
Dialogues and Perception of Intersubjectivity in a Small Group ........................................ 1446

Met-Chung Lin, National Changhua University of Education, Taiwan
Met-Chi Chen, National Changhua University of Education, Taiwan
Chin-Chang Chen, National Changhua University of Education, Taiwan

Chapter 7.7
Constructivism in Synchronous and Asynchronous Virtual Learning Environments for a Research Methods Course .............................................. 1466

Kenneth David Strang, University of Technology, Sydney, Australia; APPC Market Research, USA; State University of New York, USA

Chapter 7.8
At the Intersection of Learning: The Role of the Academic Library in 3D Environments ........ 1481

Nita J. Matzen, Appalachian State University, USA
Louisa Ochoa, Appalachian State University, USA
Geraldine Purpur, Appalachian State University, USA

Chapter 7.9
Collaboration and the Use of Three Dimensional Interface within a Virtual Learning Environment ................................................................................. 1493

Brian G. Burton, Abilene Christian University, USA
Barbara Martin, University of Central Missouri, USA
Doug Thomas, University of Central Missouri, USA

Chapter 7.10
Technophobe to Technophile…Entering the Internet Culture ........................................................................ 1506

Pamela L. Anderson-Mejias, The University of Texas—Pan American, USA
Chapter 7.11
Three Stages in the Social Construction of Virtual Learning Environments............................................. 1518

Ken Stevens, Memorial University of Newfoundland, Canada & Victoria University of Wellington, New Zealand

Chapter 7.12
Disability Standards and Guidelines for Learning Management Systems: Evaluating Accessibility................................................................. 1530

Lourdes Moreno, Universidad Carlos III de Madrid, Spain
Ana Iglesias, Universidad Carlos III de Madrid, Spain
Rocio Calvo, Universidad Carlos III de Madrid, Spain
Sandra Delgado, Universidad Carlos III de Madrid, Spain
Luis Zaragoza, News Service, Radio Nacional de España, Spain

Chapter 7.13
The Centralisation Dilemma in Educational IT ................................................................. 1550

Martin Weller, The Open University, UK

Section 8
Emerging Trends

This section highlights research potential within the field of Virtual Learning Environments while exploring uncharted areas of study and future research directions. The section opens with a look at future trends in formula editors, handwriting analysis, LMS interoperability, mentoring, and surveillance, to name a few topics. Also of note among the final 14 chapters is a look at improving the tracking of student participation and effort in online learning. In all, section 8 concludes the book well with suggestions towards where the field is heading and what to look forward to as Virtual Learning Environments and their applications expand into the future.

Chapter 8.1
Into the Great Wide Open: Responsive Learning Environments for Personalised Learning .............. 1560

Dirk Thiessen, IMC (UK) Learning, UK
Volker Zimmermann, IMC AG, Germany
Tilman Kuchler, IMC AG, Germany

Chapter 8.2
Formula Editors and Handwriting in Mathematical E-Learning ............................................................. 1578

Morten Misfeldt, The Danish School of Education, Aarhus University, Denmark
Anders Sanne, Norwegian University of Science and Technology, Norway

Chapter 8.3
Homo Virtualis: Virtual Worlds, Learning, and an Ecology of Embodied Interaction...................... 1594

Leslie Jarmon, The University of Texas at Austin, USA
Chapter 8.4
A Comparative Study on LMS Interoperability
José Paulo Leal, CRACS/INESC-Porto & DCC/FCUP, University of Porto, Portugal
Ricardo Queirós, CRACS/INESC-Porto & DI/ESEIG/IPP, Porto, Portugal

Chapter 8.5
Course Management Systems in Transition: A Mixed-Method Investigation of Students Perceptions and Attitudes of Distance Education
Gary M. Szirony, University of Arkansas at Little Rock, USA
Carrie J. Boden, University of Arkansas at Little Rock, USA

Chapter 8.6
Enhancing Electronic Examinations through Advanced Multiple-Choice Questionnaires
Dimos Triantis, Technological Educational Institution of Athens, Greece
Errikos Ventouras, Technological Educational Institution of Athens, Greece

Chapter 8.7
Mentoring the Next Generation
Kate Schrauth, icouldbe.org, USA
Elie Losleben, icouldbe.org, USA

Chapter 8.8
Surveillance in the Virtual Classroom
Morgan Luck, Charles Sturt University, Australia & The Centre for Applied Philosophy and Public Ethics, Australia

Chapter 8.9
Improving the Tracking of Student Participation and Effort in Online Learning
Ian Douglas, Florida State University, USA

Chapter 8.10
Screencasting for Mathematics Online Learning: A Case Study of a First Year Operations Research Course at a Dual Delivery Mode Australian University
Birgit Loch, Swinburne University of Technology, Australia

Chapter 8.11
From Active Reading to Active Dialogue: An Investigation of Annotation-Enhanced Online Discussion Forums
Cindy Xin, Simon Fraser University, Canada
Geoffrey Glass, Simon Fraser University, Canada
Andrew Feenberg, Simon Fraser University, Canada
Eva Bures, Bishops University, Canada
Phil Abrami, Concordia University, Canada
Chapter 8.12
The “Trigger” Experience: Text Messaging as an Aide Memoire to Alert Students in Mobile Usage of Teaching and Learning Resources ................................................................. 1736
   Joan Richardson, RMIT University, Australia
   John Lenarcic, RMIT University, Australia

Chapter 8.13
An Exploratory Study of Student Self-Assessment in an Online Learning Context ................. 1754
   Chien-hsing Wang, National Changhua University of Education, Taiwan

Chapter 8.14
Evaluations of Online Learning Activities Based on LMS Logs........................................... 1767
   Paul Lam, The Chinese University of Hong Kong, Hong Kong
   Judy Lo, The Chinese University of Hong Kong, Hong Kong
   Jack Lee, The Chinese University of Hong Kong, Hong Kong
   Carmel McNaught, The Chinese University of Hong Kong, Hong Kong