

# INTERNATIONAL JOURNAL OF DISTANCE EDUCATION TECHNOLOGIES

October-December, 2013 Vol. 11, No. 4

## Table of Contents

### SPECIAL ISSUE ON LEARNING TECHNOLOGIES AND LEARNING ENVIRONMENTS

#### GUEST EDITORIAL PREFACE

- iv Hui-Chun Chu, *Department of Computer Science and Information Management, Soochow University, Taipei, Taiwan*  
Chengjiu Yin, *Research Institute for Information Technology, Kyushu University, Fukuoka, Japan*

#### SPECIAL SECTION RESEARCH ARTICLES

- 1 **Developing a 3D Game Design Authoring Package to Assist Students' Visualization Process in Design Thinking**  
Ming-Shiou Kuo, *Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan*  
Tsung-Yen Chuang, *Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan*
- 17 **An Examination of Game-Based Learning from Theories of Flow Experience and Cognitive Load**  
Chih-Hung Lai, *Department of Computer Science and Information Engineering, National Dong Hwa University, Hualien, Taiwan*  
Chih-Ming Chu, *Department of Computer Science and Information Engineering, National Dong Hwa University, Hualien, Taiwan*  
Hsiang-Hsuan Liu, *Department of Computer Science and Information Engineering, National Dong Hwa University, Hualien, Taiwan*  
Shun-Bo Yang, *Department of Computer Science and Information Engineering, National Dong Hwa University, Hualien, Taiwan*  
Wei-Hsuan Chen, *Department of Computer Science and Information Engineering, National Dong Hwa University, Hualien, Taiwan*
- 30 **Activity Theory Approach to Developing Context-Aware Mobile Learning Systems for Understanding Scientific Phenomenon and Theories**  
Lorna Uden, *Faculty of Computing, Engineering and Science, Staffordshire University, Stoke-on-Trent, UK*  
Gwo-Jen Hwang, *Graduate Institute of Digital Learning and Education, National Taiwan University of Science and Technology, Taipei, Taiwan*
- 45 **Quiz Making Activities Using the Multi-Mouse Quiz System in an Elementary School**  
Juan Zhou, *Graduate School of Informatics, Kyoto University, Kyoto, Japan*  
Mikihiko Mori, *Academic Center for Computing and Media Studies, Kyoto University, Kyoto, Japan*  
Hiroshi Ueda, *Academic Center for Computing and Media Studies, Kyoto University, Kyoto, Japan*  
Hajime Kita, *Academic Center for Computing and Media Studies, Kyoto University, Kyoto, Japan*
- 63 **An Automated Method to Generate e-Learning Quizzes from Online Language Learner Writing**  
Brendan Flanagan, *Graduate School of Information Science and Electrical Engineering, Kyushu University, Fukuoka, Japan*  
Chengjiu Yin, *Research Institute for Information Technology, Kyushu University, Fukuoka, Japan*  
Sachio Hirokawa, *Research Institute for Information Technology, Kyushu University, Fukuoka, Japan*  
Kiyota Hashimoto, *School of Humanities and Social Sciences, Osaka Prefecture University, Sakai, Japan*  
Yoshiyuki Tabata, *Research Institute for Information Technology, Kyushu University, Fukuoka, Japan*
- 81 **A Customizable Language Learning Support System Using Ontology-Driven Engine**  
Jingyun Wang, *Kochi University of Technology, Kami, Japan*  
Takahiko Mendori, *Kochi University of Technology, Kami, Japan*  
Juan Xiong, *Xiamen University of Technology, Fujian, China*

#### RESEARCH ARTICLES

- 97 **Critical Analysis on Open Source LMSs using FCA**  
K. Sumangali, *School of Information Technology & Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India*  
Ch. Aswani Kumar, *School of Information Technology & Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India*
- 112 **A 3D Serious City Building Game on Waste Disposal**  
Stefania Cuccurullo, *Department of Management and Information Technology, University of Salerno, Salerno, Italy*  
Rita Francesc, *Department of Management and Information Technology, University of Salerno, Salerno, Italy*  
Ignazio Passero, *Department of Management and Information Technology, University of Salerno, Salerno, Italy*  
Genoveffa Tortora, *Department of Management and Information Technology, University of Salerno, Salerno, Italy*

#### BOOK REVIEW

- 136 **Virtual Mentoring for Teachers: Online Professional Development Practices**  
Joan Guàrdia-Olmos, *University of Barcelona, Catalonia, Spain*

#### Copyright

The *International Journal of Distance Education Technologies (IJDET)* (ISSN 1539-3100; eISSN 1539-3119), Copyright © 2013 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.

The *International Journal of Distance Education Technologies* is indexed or listed in the following: ABI/Inform; ACM Digital Library; Aluminium Industry Abstracts; Australian Education Index; Bacon's Media Directory; Burrelle's Media Directory; Cabell's Directories; Ceramic Abstracts; Compendex (Elsevier Engineering Index); Computer & Information Systems Abstracts; Corrosion Abstracts; CSA Civil Engineering Abstracts; CSA Illumina; CSA Mechanical & Transportation Engineering Abstracts; DBLP; DEST Register of Refereed Journals; EBSCOhost's Academic Search; EBSCOhost's Academic Source; EBSCOhost's Business Source; EBSCOhost's Computer & Applied Sciences Complete; EBSCOhost's Computer Science Index; EBSCOhost's Computer Source; EBSCOhost's Current Abstracts; EBSCOhost's Science & Technology Collection; Electronics & Communications Abstracts; Engineered Materials Abstracts; ERIC – Education Resources Information Center; GetCited; Google Scholar; INSPEC; JournalTOCs; KnowledgeBoard; Library & Information Science Abstracts (LISA); Materials Business File - Steels Alerts; MediaFinder; Norwegian Social Science Data Services (NSD); PsycINFO®; PubList.com; SCOPUS; Solid State & Superconductivity Abstracts; The Index of Information Systems Journals; The Standard Periodical Directory; Ulrich's Periodicals Directory