IADIS International Conference on Cognition and Exploratory Learning in Digital Age

(CELDA 2011)

Rio de Janeiro, Brazil
6-8 November 2011

Editors:

Demetrios G. Sampson
Dirk Ifenthaler
J. Michael Spector
Pedro Isaias

ISBN: 978-1-62748-336-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the International Association for Development of the Information Society (IADIS)
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact
the International Association for Development of the Information Society (IADIS)
at the address below.

International Association for Development of the Information Society (IADIS)
Rua Sao Sebastiao Da Pedreira
No. 100, 30, 1050-209
Lisbon, Portugal

Phone: 351 21 3151373
Fax: 351 21 3151244

secretariat@iadis.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

FOREWORD xi

PROGRAM COMMITTEE xiii

KEYNOTE LECTURES xvii

FULL PAPERS

WHEN EXPLORATORY LEARNING MAY NOT WORK: A COGNITIVE LOAD PERSPECTIVE 3
Slava Kalyuga

OBSERVING COGNITION FROM UNACCEPTABLE ANSWERS 11
Jay C. Powell

IMPROVEMENTS TO TEACHING PLANS USING CARTOON-BASED TEACHING SIMULATION IN PRE-SERVICE TEACHER TRAINING 19
Yoshihiko Kubota, Hideyuki Suzuki and Toshio Mochizuki

PREACTIONAL SELF-REGULATION AS A TOOL FOR SUCCESSFUL PROBLEM SOLVING AND LEARNING 26
Thomas Lehmann and Dirk Ifenthaler

SUPPORT FOR INQUIRY THROUGH REFLECTION OF REGULATIVE ACTIVITIES: EXPERIENCES IN THE LEARNING ENVIRONMENT YOUNG RESEARCHER 35
Margus Pedaste, Mario Mäeots, Äli Leijen and Tago Sarapuu

INCOM: A WEB-BASED HOMEWORK COACHING SYSTEM FOR LOGIC PROGRAMMING 43
Nguyen-Thinh Le and Niels Pinkwart

GIGAPAN: ONE TOOL, BRINGING THE WORLD CLOSER TOGETHER 51
Clara Phillips

DEVELOPING CROSS-CURRICULAR COMPETENCES IN ENGINEERING DEGREE CURRICULA THROUGH WEB 2.0 ONLINE SOCIAL OBJECTS 58
Mercedes Rico, Julian Coppens, Paula Ferreira, Héctor Sánchez and J. Enrique Agudo

ACCOUNTABILITY: LEARNING IN A CULTURE OF HIGH STAKES TESTING 65
Doris G. Johnson

PRESCRIBING HELP FOR FUTURE DOCTORS: CHARACTERISTICS OF AN OPEN, ONLINE, MCAT STUDY FORUM 73
Carla Van de Sande and Catherine Hart-Weber

IDENTIFYING SOCIAL PRESENCE INDICATORS IN EDUCATIONAL COMPUTER CONFERENCING 80
Helvia Pereira Pinto Bastos, Magda Bercht and Leandro Krug Wives

EXPERIENCES OF FUNCTIONAL PRACTICES OF THE EDUCATIONAL USE OF ICT AS A PART OF THE SCHOOL CULTURE 88
Sanna Vahtivuori-Hänninen, Heikki Kynäslahti and Hannele Niemi

ACTIVITY THEORY AND M-LEARNING IN THE TEACHING OF CALCULUS 95
Silvia Cristina Freitas Batista, Patricia Alejandra Behar and Liliana Maria Passerino

BALANCING RIGOR AND RELEVANCE IN SCHOOLING: A 1ST PERSON EDUCATION ENDEAVOR 103
Asghar Iran-Nejad and Shelly Anderton Cain

DEVELOPMENT OF AN ONLINE ENGLISH LEARNING ENVIRONMENT USING A USER-BASED COLLABORATIVE FILTERING SYSTEM 115
Masanori Yamada, Satoshi Kitamura, Tadashi Misono, Noriko Kitani and Yuhei Yamauchi

STUDENT-CENTERED MULTI-AGENT MODEL FOR ADAPTIVE VIRTUAL COURSES DEVELOPMENT AND LEARNING OBJECT SELECTION 123
Demetrio Arturo Ovalle, Francisco Javier Arias and Julian Moreno

E-TUTORIAL SUPPORT FOR VIRTUAL COLLABORATIVE LEARNING IN PRACTICE – AN EXPLORATIVE FIELD STUDY 131
Birgitta Kopp, Maria Cristina Matteucci, Carlo Tomasetto and Heinz Mandl

THE INTERACTIVE WHITEBOARD AS A TOOL FOR STUDENT-CENTERED LEARNING 139
Diane L. Judd, Inez A. Heath and Mark J. Fenster

MEDICAL EDUCATIONAL SIMULATIONS: EXPLORING RECIPROCITY BETWEEN LEARNERS' SKILLS, ATTITUDES, AND CAREER INTENTIONS 147
Pamela Leonard, Elena Libin, Yuri Millo and Alexander Libin

EXPANDING THE SCIENCE AND WRITING CURRICULAR SPACE: THE GLOBALED2 PROJECT 154
Kimberly A. Lawless, Scott W. Brown, Kamila Browdowinska Bruscianelli, Mark A. Boyer, Greg Mullin, Mariya Yukhymenko, Gena Khodos, Lisa Lynn, Andrew Cutter, Nicole Powell and Maria Fernada Enriquez

TO UNDERSTAND THE PRODUCT LIFECYCLE MANAGEMENT THANKS TO A SERIOUS GAME ENVIRONMENT 161
Thibault Carron, Philippe Pernelle and Jean-Charles Marty

COLLABORATIVE WRITING WITH WIKIS: EVALUATING STUDENTS' CONTRIBUTIONS 173
Said Hadjerrouit

IMPACTING MIDDLE SCHOOL STUDENTS' SCIENCE KNOWLEDGE WITH PROBLEM-BASED LEARNING SIMULATIONS 181
Scott W. Brown, Kimberly A. Lawless, Mark A. Boyer, Greg Mullin, Mariya Yukhymenko, Andrew Cutter, Kamila Browdowinska Bruscianelli, Nicole Powell, Maria Fernada Enriquez, Jerry Rice and Gena Khodos

SERIOUS GAMES AND ENGLISH AS A FOREIGN LANGUAGE IN PRIMARY SCHOOL – A POLICY PERSPECTIVE 188
Bente Meyer and Birgitte Holm Sørensen

PROGRAMMING PLUSH TOYS AS AN INTRODUCTION TO COMPUTER SCIENCE: THE (FRAUGHT) QUESTION OF MOTIVATION 195
Yingdan Huang, Jane Meyers, Wendy DuBow, Zhen Wu and Michael Eisenberg

DARK CLOUDS ON THE HORIZON? UNRESOLVED ISSUES IN CLOUD COMPUTING IN EDUCATION 203
Alan S. Weber

VIDEO TECHNOLOGIES IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM) EDUCATION 211
Irene Plonczak and Elena Juraisate-Harbison

MOBILE LEARNING USING TABLETS: THE SOFIA UNIVERSITY CASE 219
Elissaveta Gourova, Asya Asenova and Pavlin Dulev

EFFECT OF VIRTUAL EXPLORATORY LEARNING FOR CYBER ASSISTANT PROFESSOR (CAP) 227
Hiroshi Matsuda and Yoshiaki Shindo

IMPROVING READING ATTENTION BY USING ANIMATION AND INTERACTION 235
Luiz Edmundo Lopes Mizutani and Taira Nakajima

SHORT PAPERS

COGNITIVE INFLUENCE THAT NUMBERS AND PLACEMENT METHODS OF ICONS IN THE SCREEN HAVE ON JUNIOR AND SENIOR PEOPLE' SEARCH 245
Haruhisa Yamaguchi and Yumi Yamaguchi

USING INTERACTIVE EDUTAINMENT LEARNING SYSTEM (IELS) PROTOTYPE TO MOTIVATE LEARNING IN NIGERIAN PRIMARY SCHOOLS 249
Peter K. Oriogun, Hadiza Ismaila, Omotayo Madein and Paul Lazarus

LEARNING ACROSS INTERNATIONAL BOUNDARIES AND DISCIPLINES 255
Raymond Amtmann

AIMING HIGHER: MEETING THE EMERGING NEEDS OF INDUSTRY - NEXUS LEARNING APPROACH 259
Les M. Sztandera

MEDICAL STUDENTS EXPERIENCE THE MOBILE AUGMENTED REALITY BLENDED LEARNING ENVIRONMENT (MARBLE®) – AN ATTRACTIVE CONCEPT FOR THE NET-GENERATION? 263
Urs-Vito Albrecht, Ute von Jan, Jörn Krückeberg, Marianne Behrends and Herbert K. Matthies

OPTIMIZATION OF INDIVIDUAL UNIVERSITY CURRICULA BASED ON EDUCATIONAL HISTORY AND VOCATIONAL AMBITIONS 267
Yoshitaka Sakurai, Setsuo Tsuruta and Rainer Knauf

UNDERSTANDING THE EFFECTIVE LEARNING HABITS OF THE GENERATION Y 271
Aytac Gogus and Nihat G. Gogus

WHAT DOES THE RESEARCH ON TEACHING LOGICAL THINKING SKILLS WITH STAND-ALONE COMPUTER-BASED TRAINING SOFTWARE TELL US? 275
Peter Fenrich

REPRESENTING SCIENTIFIC KNOWLEDGE 279
Rosina O. Weber and Sidath Gunawardena

SPATIAL SENSE AND PRESCHOOLERS: A TEACHING APPROACH USING THE SCRATCH SOFTWARE 284
Tharrenos Bratitsis and Evanthia Louki

THE ADVANTAGE OF EUROPE WIDE CERTIFICATIONS FOR MANAGEMENT JOB ROLES 288
Michael Reiner

USING MULTIMEDIA IN DEVELOPING THE EDUCATIONAL APPLICATIONS OF MULTIPLE INTELLIGENCES 293
Ibrahim A. Homaidan and Saad Dayel

IPAD USAGE IN DENTISTRY 297
H. K. Matthies, A. Ammann, Ä. Klebba, J. Krueckeberg, K. Illiger and U-V. Albrecht

VIRTUAL EDUCATION FOR ENGINEERS AT UAM 303
María del Carmen González Cortés and Margarita Portilla Pineda

A TRAINING PROGRAM OF DIFFERENTIAL DIAGNOSIS OF DISSOCIATIVE DISORDERS BASED ON VIRTUAL SIMULATIONS 307
Jose Gutierrez-Maldonado, Antonio Andres-Pueyo, Claudia Peñaloza and Marta Ferrer

MULTIMEDIA SELECTION: ALLOWING EDUCATORS TO ACT CRITICALLY AND INDEPENDENTLY 311
Joni de Almeida Amorim and Rosana Giaretta Sguerra Miskulin

REFLECTION PAPERS

WHAT DO STUDENTS THINK ABOUT MOBILE DEVICES IN FORMAL LEARNING SETTINGS? 317
Stefan Geisler and Marc Jansen

INVESTIGATING FACTORS INFLUENCING THE USEFULLNESS OF ICT SUPPORTED PEER FEEDBACK USING CORPUS ANALYSIS 319
Djuddah A.J. Leijen

REFORMING EDUCATION: CUSTOM-BLENDED LEARNING RESOURCES: MERGING TECHNOLOGY AND COLLABORATIVE LEARNING IN THE TWO-YEAR COLLEGE TEACHER EDUCATION CURRICULUM 321
Beryle I. Baker

VISUALIZATION OF LEARNING OUTCOMES USING CURRICULUM MAPPING 323
Takashi Ikuta and Yasushi Gotoh

DEVELOPMENT OF AN INTELLIGENT LEARNING MANAGEMENT SYSTEM TO SUPPORT STUDENT DIVERSITY 326
Samia Oussena, Elizabeth Sokolowski and Tony Clark

UNIVERSITY OF HAWAII AT MANOA IN SECOND LIFE: A VIRTUAL CAMPUS CASE STUDY 329
Ekaterina Prasolova-Førland and Peter Leong

AUTHOR INDEX