IADIS International Conference on Cognition and Exploratory Learning in Digital Age

(CELDA 2010)

Timisoara, Romania 15-17 October 2010

Editors:

Kinshuk J. Michael Spector Dirk Ifenthaler Demetrios G. Sampson Pedro Isaias Radu Vasiu

ISBN: 978-1-62748-335-3

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© (2010) 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

хi

FOREWORD

PROGRAM COMMITTEE	xiii
KEYNOTE LECTURE	xvii
FULL PAPERS	
INTEGRATING DIGITAL GAMES INTO SCHOOL CURRICULUM: A FIELD EXPERIMENT IN MATH EDUCATION Hercules Panoutsopoulos and Demetrios G. Sampson	3
DESIGNING ONLINE QUIZZES: A WHOLE OF CURRICULUM APPROACH Maree Gosper	11
SQAR: AN ANNOTATION-BASED STUDY PROCESS TO ENHANCE THE LEARNER'S PERSONAL LEARNING Belkacem Mostefai, Faiçal Azouaou and Amar Balla	19
FIRST ON THE LIST: SEO CONTESTS AS AUTHENTIC LEARNING Mark Frydenberg and John S. Miko	27
ABERRANCE DETECTION POWER COMPARISONS FOR A NEW COUPLE OF PERSON-FIT INDICES AND OTHERS *Tsai-Wei Huang**	35
COLLABORATIVE LEARNING TOOLS IN HIGER EDUCATION AND LIFE-LONG LEARNING Cosmin Porumb, Sanda Porumb, Bogdan Orza and Aurel Vlaicu	46
KEY-ROLES IN VLES: A METRIC BASED ON SOCIAL NETWORK ANALYSIS Maria Assunta Barchiesi, Elisa Battistoni, Paola Pasqualino and Gianluca Murgia	53
A PRELIMINARY STUDY ON STUDENTS' LEARNING EXPERIENCE IN AN INTERNATIONAL ONLINE SYNCHRONOUS RESEARCH SEMINAR Daniel Chia-En Teng, Tommaso Leo, Kinshuk and Nian-Shing Chen	63
ASSESSMENT OF MOTIVATION IN GAMING BASED E-LEARNING Ioana Ghergulescu and Cristina Hava Muntean	71
PRESENCE, PIAGET'S STAGES OF DEVELOPMENT AND MIDDLE SCHOOL CHILDREN PARTICIPATION IN AN IMMERSIVE VIRTUAL GAME ENVIRONMENT Catherine C Schifter, Diane Jass Ketelhut and Brian C. Nelson	79

EPISTEMOLOGICAL BELIEFS AND ILL-DEFINED PROBLEM-SOLVING IN SOLO AND DUO CONTEXTS Charoula Angeli and Nicos Valanides	87
INDIVIDUAL DIFFERENCES IN DIFFERENT LEVEL MENTAL ROTATION TASKS: AN EYE MOVEMENT STUDY Sacide Güzin Mazman and Arif Altun	95
AN ARCHITECTURE FOR DYNAMIC STUDENT MODELLING OF LEARNING STYLES IN LEARNING SYSTEMS AND ITS APPLICATION FOR ADAPTIVITY Sabine Graf, Kinshuk, Qingsheng Zhang, Paul Maguire and Victoria Shtern	103
THE INCREASING NEED OF VALIDATION OF NON-FORMAL AND INFORMAL LEARNING. THE CASE OF THE COMMUNITY OF PRACTICE "WEBM.ORG" Sabrina Leone, Giuliana Guazzaroni, Laura Carletti and Tommaso Leo	111
THE IPTEACES ELEARNING FRAMEWORK - ANALYSIS OF SUCCESS INDICATORS AND THE IMPACT ON STUDENT SOCIAL DEMOGRAPHIC CHARACTERISTICS Nuno Pena and Pedro Isaías	120
REAL WORLD, STUDENT SELECTABLE DATA FOR EDUCATION – LEARNING GRAPH ALGORITHMS Ville Karavirta	129
FUTURE TEACHERS' REFLECTIONS ON TEACHING TECHNOLOGY: WHAT DID THEY LEARN FROM SERVICE-LEARNING? Junko Yamamoto	137
COLLABORATIVE LANGUAGE LEARNING AS A DEVICE INDEPENDENT APPLICATION Andreas Christ, Markus Feisst and Razia Sultana	145
ALIGNING TECHNOLOGIES AND THE CURRICULUM: A SNAPSHOT OF ACADEMIC PRACTICE Margot McNeill, Maree Gosper and John Hedberg	153
BEYOND PLAYING WITH LEGO BRICKS: MODELING INTERACTION BETWEEN BEHAVIORAL ARTIFACTS Bent Bruun Kristensen, Daniel May and Palle Nowack	161
EMPHASIZED LANDMARKS FOR MENTAL CALIBRATION IN A MOBILE AUGMENTED REALITY APPLICATION Helge Fredheim	169
E-MENTORING IN VOCATIONAL TEACHER EDUCATION David Lord and Nele Coninx	177
THE NEED OF FULL-FEATURED WEB-BASED FORMATIVE ASSESSMENT IN A MEDICAL PBL-CURRICULUM: STUDENTS', LECTURERS' AND THEORY'S VIEW Stefan P. Minder, Felix M. Schmitz and Sissel Guttormsen Schär	184
ASSESSING THE EFFICTIVENESS OF PROMPTS FOR SELF-REGULATED LEARNING Dirk Ifenthaler and Tobias Schmidt	193

AN ANALYSIS OF ANSWER SELECTION PATTERNS FROM MULTIPLE-CHOICE	
TEMS	

203

Jay C. Powell, James Bernauer and Vishnuteerth Agnihotri

SHORT PAPERS

VOCABULARY LEARNING WITH COLORED LEARNING MATERIALS Yuichi Yuzuhara, Yong Xu, Keiichi Kaneko, Masatoshi Ishikawa and Haruko Miyakoda	217
VIRTUAL EXPERIMENTATION TOWARDS THE DEVELOPMENT OF EARLY ENVIRONMENTAL RESPONSIBILITY SKILLS Hariklia Tsalapatas, Olivier Heidmann and Marina Mogli	221
USING IMMERSIVE VIRTUAL ENVIRONMENTS TO ASSESS SCIENCE CONTENT UNDERSTANDING: THE IMPACT OF CONTEXT Diane Jass Ketelhut, Brian C. Nelson, Catherine C. Schifter and Younsu Kim	227
ROBOT TECHNOLOGY AND NUMBERS IN THE CLASSROOM Gunver Majgaard, Morten Misfeldt and Jacob Nielsen	231
THE SOCIAL SOFTWARE BUILDING BLOCKS Roberto Pereira, Maria Cecilia C. Baranauskas, Meire Cavalcante and Maria Teresa Eglér Mantoan	235
A PROPOSAL OF PROGRAM TO ENHANCE DISTANCE SUPPORT ABILITY OF LEARNING SUPPORTER Ryo Takaoka, Masayuki Shimokawa, Shigeki Ahama, Toshiaki Honda and Toshio Okamoto	240
E-LEARNING TEACHING AND LEARNING MODEL Bozena Mannova	245
DEVELOPMENT AND EVALUATION OF REAL TIME LECTURE SUPPORT SYSTEM USING CELL PHONES Masayuki Shinohara, Hiroshi Shimeno, Shigenori Ioroi and Hiroshi Tanaka	249
THE EFFECT OF PROJECT BASED WEB 2.0-LEARNING ON STUDENTS' OUTCOMES Bahaaeldin Mohamed and Thomas Koehler	253
ONLINE EMPLOYABILITY WORKSHOPS – A PILOT TEST Kathleen Houston	259
PROPOSING A FRAMEWORK FOR BLENDED AND FLEXIBLE COURSE DESIGN Timos Almpanis, Susan Patrick, Ruth Mclellan, Christina Dinsmore, Andrea Faustino and Whysnianti Basuki	263
SITUATED SIMULATION AS A LEARNING TOOL – EXPERIENCING FORUM IULIUM WITH THE IPHONE Vegard Fleischer Orkelbog	268

THE EFFECT OF PRIOR KNOWLEDGE ON LEARNERS' NAVIGATION STRUCTURE Gökhan Akçapınar and Arif Altun	273
EXPLOITING VIRTUAL WORLDS FOR TEACHERS' PROFESSIONAL DEVELOPMENT Kallonis Pavlos and Demetrios G Sampson	277
EFFECTS OF PAPER-STORYBOOKS AND E-STORYBOOKS WITH READING COMPREHENSION STRATEGIES ON FIFTH GRADERS' READING COMPREHENSION ABILITY AND READING MOTIVATION Hsiu-Shuang, Huang, Shang-Liang, Chen, Yea-Mei, Leou, Ho-Chuan, Huang, Ching-Yu Yen, Yun-Yao, Chen and Ya-Ying, Tseng	281
EXPLORING CONCEPT LEARNING IN A WIRELESS SENSOR NETWORKING ENVIRONMENT: A CHINESE LANGUAGE EXAMPLE Hsiu-Ping Yueh, Shihkuan Hsu, Chih-Ting Lin and Yuan-Chen Liu	285
ANALYSIS OF LEARNING CURVES FOR WEIGHTED CONSTRAINT-BASED TUTORING SYSTEMS Nguyen-Thinh Le and Niels Pinkwart	289
REFLECTION PAPERS	
PROMOTING LIFE LONG LEARNING AND DIVERSITY IN THE FURTHER EDUCATION Ileana Hamburg, Timothy Hall and Emma O'Brien	297
THE STRINGPRINTER: FIRST STEPS TOWARD CHILD-FRIENDLY FABRICATION DEVICES	300
Kyle Ludwig, Nwanua Elumeze, and Michael Eisenberg	
	303

307

MAKING A COMPLEX MANGA CASE FOR LEARNING IN PRACTICE:

EMBEDDING AWARENESS, EXPERIENCE AND KNOWLEDGE IN THE

DESCRIPTION

Akiko Orita, Atsushi Yoshikawa and Takao Terano

EU PROJECT PAPER

VIRTUAL COMMUNITIES OF PRACTICE DESIGN IN THE FRAMEWORK OF EU PROJECTS: A CASE-STUDY

311

Laura Carletti and Tommaso Leo<

AUTHOR INDEX

ix