Contents

1 Influencing Metacognition in a Traditional Classroom Environment Through Learning Analytics .................. 1
Wayne J. Brown and Kinshuk

2 Predicting Newcomer Integration in Online Knowledge Communities by Automated Dialog Analysis ................ 13
Nicolae Nistor, Mihai Dascălu, Lucia Larise Stavarache, Christian Tarnai and Ștefan Trăușan-Matu

3 SCALE: A Competence Analytics Framework ................ 19
David Boulanger, Jérémie Seanosky, Colin Pinnell, Jason Bell, Vivekanandan Kumar and Kinshuk

4 VAT-RUBARS: A Visualization and Analytical Tool for a Rule-Based Recommender System to Support Teachers in a Learner-Centered Learning Approach ...................... 31
Hazra Imran, Kirstie Ballance, Julia Marques Carvalho Da Silva, Kinshuk and Sabine Graf

5 Improving Learning Style Identification by Considering Different Weights of Behavior Patterns Using Particle Swarm Optimization ................................................................. 39
Jason Bernard, Ting-Wen Chang, Elvira Popescu and Sabine Graf

6 Designing Mobile Games for Improving Self-esteem in Children with ADHD ............................................ 51
Nilufar Baghaei, John Casey, Yvette Ahmad, Hai-Ning Liang and Zhen Yu

7 Smart Classroom 2.0 for the Next Generation of Science Learning in Taiwan .......................... 61
Chun-Yen Chang, Chia-Li Debra Chen and Yueh-Hsia Chang
8 Software-Defined Networking (SDN)-Based Network Services for Smart Learning Environment .......................... 69
Kannan Govindarajan, Vivekanandan Suresh Kumar, David Boulanger, Jérémie Seanosky, Jason Bell, Colin Pinnell, Kinshuk and Thamarai Selvi Somasundaram

9 Design of Theoretical Model for Smart Learning .................. 77
Xiaolin Liu, Ronghuaie Huang and Ting-Wen Chang

10 AlecsoApps: Toward Empowering Mobile Applications Development in the Arab World ........................... 87
Mohamed Jemni, Koutheair Khribi, Achraf Othman, Oussama Elghoul and Kabil Jaballah

11 Designing Creativity Developing Activities and Studying the Effects on Students in Web-Based Learning Environments ........................................ 95
Sezer Köse Biber and Zerrin Ayvaz Reis

12 Toward a Learning Ecosystem to Support Flipped Classroom: A Conceptual Framework and Early Results .................. 105
Michail N. Giannakos, John Krogstie and Trond Aalberg

13 Historical Overview of Adaptive e-learning Approaches Focusing on the Underlying Pedagogy ................. 115
Anna Mavroudi and Thanasis Hadzilacos

14 Using the Hybrid Social Learning Network to Explore Concepts, Practices, Designs and Smart Services for Networked Professional Learning ............................... 123
John Cook, Tobias Ley, Ronald Maier, Yishay Mor, Patricia Santos, Elisabeth Lex, Sebastian Dennerlein, Christoph Trattner and Debbie Holley

15 Quantitative Analysis of Newcomer Integration in MMORPG Communities .................................. 131
Nicolae Nistor

16 Designing a Learning Recommender System by Incorporating Resource Association Analysis and Social Interaction Computing ........................................... 137
Yanyan Li, Yafeng Zheng, Jia Kang and Haogang Bao

17 Investigating Students’ Blogging Activity in Project-Based Learning Settings .................................. 145
Elvira Popescu
18 How Video Usage Styles Affect Student Engagement? 
Implications for Video-Based Learning Environments ............ 157
Michail N. Giannakos, Letizia Jaccheri and John Krogstie

19 Student Engagement Pattern in Wiki- and Moodle-Based 
Learning Environments—A Case Study on Romania .......... 165
Liana Stanca and Cristina Felea

20 Integrating Motivational Techniques into Learning 
Management Systems ...................................................... 173
Sabine Graf, Philippe Lachance and Biswajeet Mishra

21 A Proposed Model for Creating Authentic Learning Objects 
for Indigenous Learners .................................................... 185
John Loewen, David Loewen, Kinshuk and Jarkko Suhonen

22 An Embodied Design with Collective Intelligence for Creating 
Interactive Video Lectures ................................................ 193
I-Chun Hung, Kinshuk and Nian-Shing Chen

23 Collaborative Learning through Creative Video Composition 
on Distributed User Interfaces .......................................... 199
Aba-Sah Dadzie, Maximilian Müller, Aris Alissandrakis 
and Marcelo Milrad

24 Students’ Learning Environments for Distance International 
Collaboration ................................................................. 211
Terje Väljataga

25 The Impact of Assigned Roles and Cross-Age Peer Tutors 
on Knowledge Elaboration, Knowledge Convergence, 
and Group Performance in Synchronous Online Learning 
Environment ................................................................. 221
Lanqin Zheng

26 Toward Non-intrusive Assessment in Dialogue-Based 
Intelligent Tutoring Systems .............................................. 231
Vasile Rus and Dan Stefanescu

27 May I Peer-Review Your Web Design Project? .............. 243
Veronika Dropčová, Martin Homola and Zuzana Kubincová

28 ICT Architecture for Supporting Elder Employees 
to Make Conscious Decisions Under Time Pressure ........... 251
Ionut Anghel, Tudor Cioara and Ioan Salomie

29 Study on Teacher–Student Interaction in Flipped Classroom 
Based on Video Annotation Learning Platform ................. 257
Qi Zhang and Fati Wu
30 Design and Implementation of Self-regulated Learning Achievement: Attracting Students to Perform More Practice with Educational Mobile Apps ........................................ 263
Vahid Bahreman, Maiga Chang, Isa Amistad and Kristin Garn

31 MUSIX: Learning Analytics in Music Teaching ......................... 269
Claudia Guillot, Rébecca Guillot, Vive Kumar and Kinshuk

32 Metric-Based Approach for Selecting the Game Genre to Model Personality ......................................................... 275
Ahmed Tlili, Fathi Essalmi and Mohamed Jemni

33 Toward a Generic e-Assessment Process: Using Cloud Computing .......................................................... 281
Fahima Hajjej, Yousa Bendaly Hlaoui and Leila Jemni Ben Ayed

34 Public Key Infrastructure for e-Assessment ................................. 287
Elisabeth Katzlinger and Johann Höller

35 Reflection on Design-Based Research: Challenges and Future Direction ......................................................... 293
Lanqin Zheng

36 Optimal Composition of e-Learning Personalization Resources . . . 297
Sameh Ghallabi, Fathi Essalmi, Mohamed Jemni and Kinshuk

37 MOOCs in Higher Education—Flipped Classroom or a New Smart Learning Model? ........................................ 303
Diana Andone and Radu Vasiu

38 Enhancing Employability Through e-Learning Communities: From Myth to Reality ......................................................... 309
Maria-Iuliana Dascalu, Bianca Tesila and Raluca Andreea Nedelcu

39 Performance Augmentation Through Ubiquitous and Adaptive Learning and Work Environments ......................................................... 315
Erik Isaksson, Ambjörn Naeve and Paul Lefrère

40 Peer Review from Teachers’ Perspective ..................................... 321
Michael A. Herzog and Elisabeth Katzlinger

41 Metrics for Automated Review Classification: What Review Data Show ......................................................... 333
Ravi K. Yadav and Edward F. Gehringer
42 What Peer-Review Systems Can Learn from Online Rating Sites .............................................. 341
Edward F. Gehringer, Kai Ma and Van T. Duong

43 Peer Review Support in a Virtual Learning Environment ........... 351
Martin Homola, Zuzana Kubincová, Jakub Čulik and Tomáš Trungel

44 Grading Open-Ended Questions in an Educational Setting, via Non-exclusive Peer Evaluation ............... 357
Maria De Marsico, Andrea Sterbini and Marco Temperini

45 A Wiki-Based Approach to Computer-Assisted Translation for Collaborative Language Learning ..................... 369
Vincenzo Baraniello, Chiara Degano, Luigi Laura, Maria Lozano Zahonero, Maurizio Naldi and Sandra Petroni

46 Integrating Rich Learning Applications in LMS ...................... 381
Ricardo Queiróš, José Paulo Leal and José Carlos Paiva

William Di Luigi, Gabriele Farina, Luigi Laura, Umberto Nanni, Marco Temperini and Luca Versari

48 Semi-automatic Annotation of MOOC Forum Posts ................ 399
Weizhe Liu, Łukasz Kidziński and Pierre Dillenbourg

49 Virtual Social Spaces for Practice and Experience Sharing ...... 409
Eman AbuKhousa and Yacine Atif

50 The Open Courses Project at the Eastern Macedonia and Thrace Institute of Technology .......................... 415
Chris Lytridis, Ioannis Kazanidis and Avgoustos Tsinakos

51 Discovering Interesting Patterns in an e-Learning System .......... 423
Anca Loredana Udristoiu and Stefan Udristoiu

52 Involving Learners in Content Analysis to Empower A Community of Inquiry ........................................... 433
Maria Tzelepi, Kyparissia Papanikolaou and Petros Roussos

Ionut Cristian Paraschiv, Mihai Dascalu, Philippe Dessus, Stefan Trausan-Matu and Danielle S. McNamara
54 A Tutorial on Machine Learning in Educational Science ........ 453
Łukasz Kidziński, Michail Giannakos, Demetrios G. Sampson
and Pierre Dillenbourg

55 A Smart Environment Supporting the Creation of Juxtaposed
Videos for Learning .................................................... 461
Nils Malzahn, Elizabeth Hartnett, Pablo Llinás
and H. Ulrich Hoppe

56 An Interactive Video-Based Learning Environment Supporting
Learning Analytics: Insights Obtained from Analyzing Learner
Activity Data .......................................................... 471
Alexandros Kleftodimos and Georgios Evangelidis

57 Investigating Determinants of Video-Based
Learning Acceptance ................................................. 483
Patrick Mikalef, Ilias O. Pappas and Michail N. Giannakos

58 Visualization Improvement in Learning Analytics
Using Semantic Enrichment ....................................... 493
Gloria Fernández and Olga Mariño
State-of-the-Art and Future Directions of Smart Learning
Li, Y.; Chang, M.; Kravcik, M.; Popescu, E.; Huang, R.; Kinshuk; Chen, N.-S. (Eds.)
2016, XVIII, 503 p., Hardcover