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
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Software-Defined Networking (SDN)-Based Network Services for Smart Learning Environment</td>
<td>Kannan Govindarajan, Vivekanandan Suresh Kumar, David Boulanger, Jérémie Seanosky, Jason Bell, Colin Pinnell, Kinshuk and Thamarai Selvi Somasundaram</td>
</tr>
<tr>
<td>9</td>
<td>Design of Theoretical Model for Smart Learning</td>
<td>Xiaolin Liu, Ronghuai Huang and Ting-Wen Chang</td>
</tr>
<tr>
<td>10</td>
<td>AlecsoApps: Toward Empowering Mobile Applications in the Arab World</td>
<td>Mohamed Jemni, Koutheair Khribi, Achraf Othman, Oussama Elghoul and Kabil Jaballah</td>
</tr>
<tr>
<td>11</td>
<td>Designing Creativity Developing Activities and Studying the Effects on Students in Web-Based Learning Environments</td>
<td>Sezer Köse Biber and Zerrin Ayvaz Reis</td>
</tr>
<tr>
<td>12</td>
<td>Toward a Learning Ecosystem to Support Flipped Classroom: A Conceptual Framework and Early Results</td>
<td>Michail N. Giannakos, John Krogstie and Trond Aalberg</td>
</tr>
<tr>
<td>13</td>
<td>Historical Overview of Adaptive e-learning Approaches Focusing on the Underlying Pedagogy</td>
<td>Anna Mavroudi and Thanasis Hadzilacos</td>
</tr>
<tr>
<td>14</td>
<td>Using the Hybrid Social Learning Network to Explore Concepts, Practices, Designs and Smart Services for Networked Professional Learning</td>
<td>John Cook, Tobias Ley, Ronald Maier, Yishay Mor, Patricia Santos, Elisabeth Lex, Sebastian Dennerlein, Christoph Trattner and Debbie Holley</td>
</tr>
<tr>
<td>15</td>
<td>Quantitative Analysis of Newcomer Integration in MMORPG Communities</td>
<td>Nicolae Nistor</td>
</tr>
<tr>
<td>17</td>
<td>Investigating Students’ Blogging Activity in Project-Based Learning Settings</td>
<td>Elvira Popescu</td>
</tr>
</tbody>
</table>
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
Design and Implementation of Self-regulated Learning Achievement: Attracting Students to Perform More Practice with Educational Mobile Apps

Vahid Bahreman, Maiga Chang, Isa Amistad and Kristin Garm

MUSIX: Learning Analytics in Music Teaching

Claudia Guillot, Rébecca Guillot, Vive Kumar and Kinshuk

Metric-Based Approach for Selecting the Game Genre to Model Personality

Ahmed Tlili, Fathi Essalmi and Mohamed Jemni

Toward a Generic e-Assessment Process: Using Cloud Computing

Fahima Hajjej, Yoursa Bendaly Hlaoui and Leila Jemni Ben Ayed

Public Key Infrastructure for e-Assessment

Elisabeth Katzlinger and Johann Höller

Reflection on Design-Based Research: Challenges and Future Direction

Lanqin Zheng

Optimal Composition of e-Learning Personalization Resources

Sameh Ghallabi, Fathi Essalmi, Mohamed Jemni and Kinshuk

MOOCs in Higher Education—Flipped Classroom or a New Smart Learning Model?

Diana Andone and Radu Vasiu

Enhancing Employability Through e-Learning Communities: From Myth to Reality

Maria-Iuliana Dascalu, Bianca Tesila and Raluca Andreea Nedelcu

Performance Augmentation Through Ubiquitous and Adaptive Learning and Work Environments

Erik Isaksson, Ambjörn Naeve and Paul Lefrère

Peer Review from Teachers’ Perspective

Michael A. Herzog and Elisabeth Katzlinger

Metrics for Automated Review Classification: What Review Data Show

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 Čulík 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 Queirós, José Paulo Leal and José Carlos Paiva

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

48 Semiautomatic 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