


Table of contents

Special issue articles

Guest Editorial: Grand Challenges and Research Directions in e-Learning of the 21th Century <i>Nian-Shing Chen and Wei-Chieh Fang</i>	1-2
Trends in Educational Technology through the Lens of the Highly Cited Articles Published in the Journal of Educational Technology and Society <i>Kinshuk, Hui-Wen Huang, Demetrios Sampson, and Nian-Shing Chen</i>	3-20
Emerging Educational Technologies and Research Directions <i>J. Michael Spector</i>	21-30
A Review of Technological Pedagogical Content Knowledge <i>Ching Sing Chai, Joyce Hwee Ling Koh and Chin-Chung Tsai</i>	31-51
The Future of Learning Technology: Some Tentative Predictions <i>Nick Rushby</i>	52-58
Bridging the Gap: Technology Trends and Use of Technology in Schools <i>Cher Ping Lim, Yong Zhao, Jo Tondeur, Ching Sing Chai, and Chin-Chung Tsai</i>	59-68
Educational Games and Virtual Reality as Disruptive Technologies <i>Joseph Psotka</i>	69-80
Positioning Design Epistemology and its Applications in Education Technology <i>Chin-Chung Tsai, Ching Sing Chai, Benjamin Koon Siak Wong, Huang-Yao Hong, and Seng Chee Tan</i>	81-90

Full length articles

Sustainable e-Learning: Toward a Coherent Body of Knowledge <i>Karen Stepanyan, Allison Littlejohn, and Anoush Margaryan</i>	91-102
A Wiki-based Teaching Material Development Environment with Enhanced Particle Swarm Optimization <i>Yen-Ting Lin, Yi-Chun Lin, Yueh-Min Huang, and Shu-Chen Cheng</i>	103-118
A Fuzzy-based Prior Knowledge Diagnostic Model with Multiple Attribute Evaluation <i>Yi-Chun Lin and Yueh-Min Huang</i>	119-136
Developing and Implementing a Framework of Participatory Simulation for Mobile Learning Using Scaffolding <i>Chengjiu Yin, Yanjie Song, Yoshiyuki Tabata, Hiroaki Ogata and Gwo-Jen Hwang</i>	137-150
Effect of Reading Ability and Internet Experience on Keyword-based Image Search <i>Pei-Lan Lei, Sunny S. J. Lin and Chuen-Tsai Sun</i>	151-162
Using Magic Board as a Teaching Aid in Third Grader Learning of Area Concepts <i>Wen-Long Chang, Yuan Yuan, Chun-Yi Lee, Min-Hui Chen and Wen-Guu Huang</i>	163-173
How Flexible Grouping Affects the Collaborative Patterns in a Mobile-Assisted Chinese Character Learning Game <i>Lung-Hsiang Wong, Ching-Kun Hsu, Jizhen Sun and Ivica Boticki</i>	174-187
A Learning Style Perspective to Investigate the Necessity of Developing Adaptive Learning Systems <i>Gwo-Jen Hwang, Han-Yu Sung, Chun-Ming Hung and Iwen Huang</i>	188-197
Analysis of Students' After-School Mobile-Assisted Artifact Creation Processes in a Seamless Language Learning Environment <i>Lung-Hsiang Wong</i>	198-211
Correcting Misconceptions on Electronics: Effects of a simulation-based learning environment backed by a conceptual change model <i>Yu-Lung Chen, Pei-Rong Pan, Yao-Ting Sung and Kuo-En Chang</i>	212-227

Timely Diagnostic Feedback for Database Concept Learning <i>Jian-Wei Lin, Yuan-Cheng Lai and Yuh-Shy Chuang</i>	228–242
Pre-service Teachers’ Perceptions on Development of Their IMD Competencies through TPACK-based Activities <i>Hatice Sancar Tokmak, Tugba Yanpar Yelken and Gamze Yavuz Konokman</i>	243–256
How Benefits and Challenges of Personal Response System Impact Students’ Continuance Intention? A Taiwanese Context <i>C. Rosa Yeh and Yu-Hui Tao</i>	257–270
Game-Based Remedial Instruction in Mastery Learning for Upper-Primary School Students <i>Chun-Hung Lin, Eric Zhi-Feng Liu, Yu-Liang Chen, Pey-Yan Liou, Maiga Chang, Cheng-Hong Wu and Shyan-Ming Yuan</i>	271–281
Situated Poetry Learning Using Multimedia Resource Sharing Approach <i>Che-Ching Yang, Shian-Shyong Tseng, Anthony Y. H. Liao and Tyne Liang</i>	282–295
Using Tangible Companions for Enhancing Learning English Conversation <i>Yi Hsuan Wang, Shelley S.-C. Young and Jyh-Shing Roger Jang</i>	296–309
Structural Relationships among E-learners’ Sense of Presence, Usage, Flow, Satisfaction, and Persistence <i>Young Ju Joo, Sunyoung Joung and Eun Kyung Kim</i>	310–324
Exploring students’ language awareness through intercultural communication in computer-supported collaborative learning <i>Yu-Fen Yang</i>	325–342
 Book Reviews	
Teenagers and Technology <i>Reviewer: Dermot Madden</i>	343–344