

Proceedings

**Second IEEE International Conference
on Digital Game and Intelligent
Toy Enhanced Learning
DIGITEL 2008**

***17-19 November 2008
Banff, Canada***

Sponsored by
IEEE Technical Committee on Learning Technology
IEEE Computer Society
Athabasca University

Hosted by
Athabasca University

Supported by
The Northern Alberta Institute of Technology



Los Alamitos, California
Washington • Tokyo



TABLE OF CONTENTS

Social Support for Creativity and Learning Online	1
<i>Amy Bruckman</i>	
The Joy of Making	6
<i>Dale Dougherty</i>	
A Mobile Phone Based Virtual Pet to Teach Social Norms and Behaviour to Children	11
<i>Hanno Hildmann, Anika Uhlemann, Daniel Livingstone</i>	
A New 3-Dimensional Comic Chat Environment for On-line Game Avatars	14
<i>Soo-Hyun Park, Seung-Hyun Ji, Dong-Sung Ryu, Hwan-Gue Cho</i>	
A Preliminary Study of Student's Self-Efficacy on Problem Solving in Educational Game Context	19
<i>Yu-Ling Lu, I-Ing Lee, Chi-Jui Lien</i>	
Adaptive Educational Games: Providing Non-invasive Personalised Learning Experiences	24
<i>Neil Peirce, Owen Conlan, Vincent Wade</i>	
Design and Evaluation of a Physical Interactive Learning Environment for English Learning	32
<i>Jie Chi Yang, Yi Lung Lin, Jia Jia Wu, Kun Huang Chien</i>	
Development of Educational Videogames in m-Learning Contexts	40
<i>Pablo Lavín-Mera, Pablo Moreno-Ger, Baltasar Fernández-Manjón</i>	
Effect of a 360 Degrees Panoramic Image System (360 PIS) on the Environment Recognition of Students with Moderate and Severe Mental Retardation in Special Education School	48
<i>I-chen Cheng, Hwa-pey Wang</i>	
Effects of Collaborative Activities on Group Identity in Second Life	53
<i>Sumin Seo, Xiangzhe Cui, Bokjin Shin</i>	
Effects of Object Building Activities in Second Life on Players' Spatial Reasoning	58
<i>Jihyun Hwang, Hyungsung Park, Jiseon Cha, Bokjin Shin</i>	
Evaluation the Efficacy of Computer - Based Training Using Tangible User Interface for Low-Function Children with Autism	66
<i>Karanya Sitdhisanguan, Nopporn Chotikakamthorn, Ajchara Dechaboon, Patcharaporn Out</i>	
Exploring Learner's Variables Affecting Gaming Achievement in Digital Game-Based Learning	71
<i>Jiseon Cha, Youngkyun Baek, Yan Xu</i>	
From Traditional to Digital: Factors to Integrate Traditional Game-Based Learning into Digital Game-Based Learning Environment	79
<i>Sheng-Hui Hsu, Po-Han Wu, Tien-Chi Huang, Yu-Lin Jeng, Yueh-Min Huang</i>	
Games as Skins for Online Tests	86
<i>Srinivasan Ramani, Venkatagiri Sirigiri, Nila Lohita Panigrahi, Shikha Sabharwal</i>	
GEOWORLDS: Utilizing Second Life to Develop Advanced Geosciences Knowledge	89
<i>Donna Russell, Molly Davies, Iris Totten</i>	
Intergenerational Learning through World of Warcraft	94
<i>Sri H. Kurniawan</i>	

Investigating the Use of a Robot with Tabla Education	99
<i>Prakash Persad, Jorrel Bisnath, Ruel Ellis</i>	
"It is so like Disco" - Dancing on the iTiles	104
<i>Stine Liv Johansen, Helle Skovbjerg Karoff</i>	
Language Learning in the Palm of Your Hand	109
<i>Mercedes Rico, J. Enrique Agudo, Héctor Sánchez, Alejandro Curado</i>	
Learning about Complexity with Modular Robots	112
<i>Eric Schweikardt, Mark D. Gross</i>	
Learning by Substitutive Competition: Nurturing My-Pet for Game Competition Based on Open Learner Model	120
<i>Zhi-Hong Chen, Tak-Wai Chan</i>	
Massively Multi-user Online Games: The Emergence of Effective Collaborative Activities for Learning	128
<i>Iro Voulgari, Vassilis Komis</i>	
Micro Adaptive, Non-invasive Knowledge Assessment in Educational Games	131
<i>Michael D. Kickmeier-Rust, Cord Hockemeyer, Dietrich Albert, Thomas Augustin</i>	
My-Mini-Pet: The Design of Pet-Nurturing Handheld Game	134
<i>Calvin C. Y. Liao, Zhi-Hong Chen, Tak-Wai Chan</i>	
On the Benefits of Tangible Interfaces for Educational Games	137
<i>Janneke Verhaegh, Willem Fontijn, Aljosja Jacobs</i>	
Online Videogames in an Online History Class	142
<i>Vance S. Martin</i>	
RoboMusicKids – Music Education with Robotic Building Blocks	145
<i>Jacob Nielsen, Niels K. Bærendsen, Carsten Jessen</i>	
The Effects of Digital Games on Undergraduate Players Flow Experiences and Affect	153
<i>Yu-Tzu Chiang, Chao-yang Cheng, Sunny S. J. Lin</i>	
The Learning Environment for Stars and Constellations in the Real World with Finger Pointing	156
<i>Masato Soga, Masafumi Miwa, Koji Matsui, Kazuki Takaseki, Kohei Tokoi, Hirokazu Taki</i>	
The Scope of Adaptive Digital Games for Education	163
<i>Rikki Prince, Hugh C. Davis</i>	
The Use of Videogames to Mediate Curricular Learning	166
<i>Begoña Gros, José M. Garrido</i>	
ToddlePuff: An Interactive Tangible and Spatial Interface	173
<i>Ilan Schifter</i>	
Using Posting Templates for Enhancing Students' Argumentative Elaborations in Learning Villages	176
<i>Morris S. Y. Jong, Alex W. C. Tse, Yuxia Zhou, Weiqin Chen, Fong-lok Lee, Jimmy H. M. Lee</i>	
Video Games in the English as a Foreign Language Classroom	184
<i>Tom A. F. Anderson, Barry Lee Reynolds, Xiao-Ping Yeh, Guan-Zhen Huang</i>	
What Will Happen to Virtual Field Trips? Beyond Classroom	189
<i>Hyungsung Park, Bokjin Shin, Xiangzhe Cui, Jihyun Hwang</i>	
ROBOKID: Let Children Construct Their Own Emotional Kids - Learning by Construction	192
<i>Gwo-Dong Chen, Mu-Chun Su, Eric Hsiao-kuang Wu, Wu-Yuin Hwang, Tzu-Chien Liu, Eric Zhi-Feng Liu, Siew-Rong Wu</i>	

Using Humanoid Robots as Instructional Media in Elementary Language Education	194
<i>Gwo-Dong Chen, Chih-Wei Chang</i>	
Application of a Learning-Companion Robot in Learning Environments	196
<i>Mu-Chun Su, De-Yuan Huang, Shih-Chieh Lin, Yi-Zeng Hsieh, Gwo-Dong Chen</i>	
A Context Aware Interactive Robot Educational Platform	198
<i>Eric Hsiao-Kuang Wu, Hubert Chi-Yu Wu, Yi-Kai Chiang, Yu-Che Hsieh, Jih-Cheng Chiu, Kuan-Ru Peng</i>	
The Effect of MSN Robot on Learning Community and Achievement	200
<i>Wu-Yuin Hwang, Sheng-Yi Wu, Hung-Cheng Chen</i>	
Human-Robot Interaction Research Issues of Educational Robots	202
<i>Tzu-Chien Liu, Maiga Chang</i>	
Robotics Instruction Using Multimedia Instructional Material	204
<i>Eric Zhi Feng Liu, Chan Hsin Kou, Ting Yin Cheng, Chun Hung Lin, Shan Shan Cheng</i>	
Humor and Empathy: Developing Students' Empathy through Teaching Robots to Tell English Jokes	206
<i>Siew-Rong Wu</i>	
Pedagogy Play: Virtual Instructors for Wearable Augmented Reality during Hands-On Learning and Play	208
<i>Jayfus T. Doswell</i>	

Author Index