

Games and Simulations in Online Learning: Research and Development Frameworks

Table of Contents

Foreword..... vi

Preface.....viii

Section I: Situating Games and Simulations in Education

Chapter I

Games and Simulations: A New Approach in Education? 1

Göknur Kaplan Akilli, Pennsylvania State University, USA

Chapter II

Pedagogy in Commercial Video Games 21

Katrin Becker, University of Calgary, Canada

Section II: Social Analyses of Games and Simulations

Chapter III

Learning Sociology in a Massively Multistudent Online Learning

Environment..... 49

Joel Foreman, George Mason University, USA

Thomasina Borkman, George Mason University, USA

Chapter IV	
Online Games for 21st Century Skills	59
<i>Lisa Galarneau, University of Waikato, New Zealand</i>	
<i>Melanie Zibit, Boston College, USA</i>	

Chapter V	
Rethinking Cognition, Representations, and Processes in 3D Online Social Learning Environments	89
<i>James G. Jones, University of North Texas, USA</i>	
<i>Stephen C. Bronack, Appalachian State University, USA</i>	

Chapter VI	
E-Simulations in the Wild: Interdisciplinary Research, Design, and Implementation	115
<i>Karen Barton, University of Strathclyde, UK</i>	
<i>Paul Maharg, University of Strathclyde, UK</i>	

Section III: What Teachers Should Know and Be Able To Do

Chapter VII	
Perspectives from Multiplayer Video Gamers	150
<i>Jonathan B. Beedle, University of Southern Mississippi, USA</i>	
<i>Vivian H. Wright, University of Alabama, USA</i>	

Chapter VIII	
Gamer Teachers	175
<i>David Gibson, CurveShift.com, USA</i>	
<i>William Halverson, SimSchool, USA</i>	
<i>Eric Riedel, Walden University, USA</i>	

Chapter IX	
Developing an Online Classroom Simulation to Support a Pre-Service Teacher Education Program	189
<i>Brian Ferry, University of Wollongong, Australia</i>	
<i>Lisa Kervin, University of Wollongong, Australia</i>	

Chapter X	
Lessons Learned Modeling “Connecting Teaching and Learning”	206
<i>Gerald R. Girod, Western Oregon University, USA</i>	
<i>Mark Girod, Western Oregon University, USA</i>	
<i>Jeff Denton, Western Oregon University, USA</i>	

Chapter XI	
Educational Theory Into Practice Software (ETIPS)	223
<i>Sara Dexter, University of Virginia, USA</i>	

Section IV: Using Real Space in Digital Games and Simulations

Chapter XII

- Pervasive Game Design as an Architectural Teaching and Research Method 236**
Steffen P. Walz, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
Odilo Schoch, Swiss Federal Institute of Technology, (ETH) Zurich, Switzerland

Chapter XIII

- Reliving History with “Reliving the Revolution”: Designing Augmented Reality Games to Teach the Critical Thinking of History 250**
Karen Schrier, MIT, USA

Section V: Embedding Assessment in Games and Simulations

Chapter XIV

- Building Artificially Intelligent Learning Games..... 271**
Richard Van Eck, University of North Dakota, USA

Chapter XV

- simSchool and the Conceptual Assessment Framework 308**
David Gibson, CurveShift.com, USA

Chapter XVI

- Designing Online Games Assessment as “Information Trails” 323**
Christian Sebastian Loh, Southern Illinois University Carbondale, USA

Chapter XVII

- Machine Learning Assessment Systems for Modeling Patterns of Student Learning 349**
Ron Stevens, UCLA IMMEX Project, USA

Chapter XVIII

- Shaping the Research Agenda with Cyber Research Assistants..... 366**
Lyn Henderson, James Cook University, Australia

- About the Authors..... 386**

- Index 394**