Table of Contents

Preface................................................................................................................................................... xv

Acknowledgment.................................................................................................................................... xvi

Section 1
Factors and Key Components of Serious Games and Multi-User Virtual Environments

Chapter 1
Concepts behind Serious Games and Computer-Based Trainings in Health Care: Immersion, Presence, Flow .......................................................... 1

Jana Birkenbusch, Technische Universität Darmstadt, Germany
Oliver Christ, Technische Universität Darmstadt, Germany

Chapter 2
Balancing Instruction and Construction in Virtual World Learning .................................................. 15

Alke Martens, University of Education Schwäbisch Gmünd, Germany
Dennis Maciuszek, University of Rostock, Germany

Chapter 3
Not in My Class You Don’t!: The Naive Association of Video Games with Aggression as a Hindrance to Their Use in Education ............................................. 41

Christopher J. Ferguson, Texas A&M International University, USA

Section 2
Authoring, Control, and Evaluation in Serious Games for Education

Chapter 4
Authoring of Serious Games for Education .......................................................................................... 60

Florian Mehm, Technische Universität Darmstadt, Germany
Christian Reuter, Technische Universität Darmstadt, Germany
Stefan Göbel, Technische Universität Darmstadt, Germany
Chapter 5
Personalized, Adaptive Digital Educational Games using Narrative Game-Based Learning

Stefan Göbel, Technische Universität Darmstadt, Germany
Florian Mehm, Technische Universität Darmstadt, Germany

Chapter 6
Collaborative Learning and Game Mastering in Multiplayer Games

Johannes Konert, Technische Universität Darmstadt, Germany
Viktor Wendel, Technische Universität Darmstadt, Germany
Kristina Richter, Technische Universität Darmstadt, Germany
Stefan Göbel, Technische Universität Darmstadt, Germany

Chapter 7
Evaluation of Serious Games

Stefan Göbel, Technische Universität Darmstadt, Germany
Michael Gutjahr, Technische Universität Darmstadt, Germany
Sandro Hardy, Technische Universität Darmstadt, Germany

Section 3
Games and Virtual Worlds in Education

Chapter 8
Social Presence in Virtual World Interviews

Elizabeth Dean, RTI International, USA
Joe Murphy, RTI International, USA
Sarah Cook, RTI International, USA

Chapter 9
Engaging Classes in a Virtual World

Sue Gregory, University of New England, Australia

Chapter 10
Gaming in School: Factors Influencing the Use of Serious Games in Public Schools in Middle Germany

Daniel Schultheiss, Ilmenau University of Technology, Germany
Maike Helm, Ilmenau University of Technology, Germany

Chapter 11
Quantitative Analysis of Voice and Keyboard Chat in a Paper Presentation Seminar in a Virtual World

Michael Gutjahr, Technische Universität Darmstadt, Germany
Wolfgang Bösche, University of Education Karlsruhe, Germany
Chapter 12
Serious Games as an Instrument of Non-Formal Learning: A Review of Web-Based Learning Experiences on the Issue of Renewable Energy ................................................................. 174
  Steffen Winny, University of Augsburg, Germany

Section 4
Games and Virtual Worlds in Health Care

Chapter 13
Serious Games and Motor Learning: Concepts, Evidence, Technology........................................... 197
  Josef Wiemeyer, Technische Universität Darmstadt, Germany
  Sandro Hardy, Technische Universität Darmstadt, Germany

Chapter 14
Clinical Virtual Worlds: The Wider Implications for Professional Development in Healthcare ........ 221
  LeRoy Heinrichs, Stanford University, USA
  Li Fellander-Tsai, Karolinska Institutet, Sweden
  Dick Davies, Ambient Performance, UK

Chapter 15
Play Yourself Fit: Exercise + Videogames = Exergames................................................................. 241
  Hannah R. Marston, German Sport University, Germany
  Philip A. McClenaghan, Augsburg University, Germany

Chapter 16
Exergames for Elderly Persons: Physical Exercise Software Based on Motion Tracking within the Framework of Ambient Assisted Living ..................................................................... 258
  Oliver Korn, KORION Simulation and Assistive Technology GmbH, Germany
  Michael Brach, University of Muenster, Germany
  Klaus Hauer, Agaplesion Bethanien-Hospital Heidelberg, Germany
  Sven Unkauf, Wohlfahrtswerk für Baden-Württemberg, Germany

Chapter 17
Social Inclusion through Virtual Worlds .......................................................................................... 269
  Hein de Graaf, Social Psychologist, The Netherlands
Chapter 18
Massively Multiplayer Online Role Playing Games for Health Communication in Brazil .......................... 294
    Marcelo Simão de Vasconcellos, Oswaldo Cruz Foundation, Brazil
    Inesita Soares de Araújo, Oswaldo Cruz Foundation, Brazil

Compilation of References .............................................................................................................. 313

About the Contributors .................................................................................................................. 349

Index............................................................................................................................................... 358