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978-1-107-05174-4 - Design and Development of Training Games: Practical

Guidelines from a Multidisciplinary Perspective

Edited by Talib S. Hussain and Susan L. Coleman

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## Design and Development of Training Games

The multidisciplinary nature of learning games development is key to successful projects. In this book, leaders in the field of serious games and professionals in entertainment games share practical guidelines and lessons learned from their own experiences researching and developing learning games.

This volume includes:

- a summary of the key elements of design and development that require particular attention from multiple disciplines to ensure success;
- an overview of successful models and methods, and of the trade-offs made throughout the process, to help guide development;
- cohesive, multidisciplinary views of the issues that may arise and of the techniques applied to produce effective learning games grounded in specific experiences, community consensus, and analysis of successful learning games that have already been released; and
- the stories behind the games, to illustrate how final design and development decisions were reached.

Aimed at professionals and academics interested in developing and researching learning games, it offers a comprehensive picture of the state of the art.

Dr. Talib S. Hussain is a senior scientist at Raytheon BBN Technologies with more than a decade of experience in developing and testing training solutions for both humans and machines. He has developed serious games for the army, the navy, and the intelligence community, among others. As principal investigator for the Office of Naval Research–sponsored Virtual Environment for Ship and Shore Experiential Learning (VESSEL) project, he led the development of authoring technology for games, the development and deployment of the VESSEL Damage Control Trainer game for navy recruit training, and several empirical studies on games and learning. His VESSEL team won the National Training and Simulation Association's 2010 Modeling and Simulation Award for Training and the 2009 Serious Games Showcase and Challenge. He has published more than twenty-five conference articles and ten archival articles (book chapters and journal articles), and has presented at numerous conferences and workshops. He founded and organized the *Design of Learning Games* community of practice, organized several serious game design workshops, and has given several tutorials on serious game design at national conferences.

Dr. Susan L. Coleman is the chief performance officer for Intelligent Decision Systems, Inc. Although she began her career as a teacher in the public school system, she has spent more than twenty years analyzing and designing training systems for the military. Her designs have won the Award of Excellence from the International Society for Performance Improvement, the Best Game Award in the business category at the 2009 Serious Games Showcase and Challenge, *Training* magazine's 2010 Outstanding Training Initiative Award, and the 2010 Outstanding Achievement in Modeling and Simulation for Training Award from the National Training and Simulation Association. She has written more than thirty-five technical reports and twelve published articles and has given numerous presentations at national conferences.

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# Design and Development of Training Games

*Practical Guidelines from a  
Multidisciplinary Perspective*

Edited by  
**Talib S. Hussain**  
Raytheon BBN Technologies  
**Susan L. Coleman**  
Intelligent Decision Systems, Inc.



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*Dedicated to my loving, late father, Professor Matlub Hussain – A lifelong  
learner and educator with a gentle soul. – TSH*

*Dedicated to my husband, Garry, and daughter, Erin, who support me in all my  
endeavors. – SLC*

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# Contributors

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**Mr. Michael Anthony** is currently a program manager for SRA’s Learning and Talent Development (L&TD) group and has sixteen years’ experience in the fields of cognitive and experimental psychology and in the design and development of emerging and Web-based training, intelligent tutoring systems, and simple and serious games. In a recent project, he was the project manager and technical design lead for a learning game teaching decision making related to the visual detection of improvised explosive device (IED) emplacements. Mr. Anthony received his MS in experimental psychology from the University of Texas, San Antonio, in 1998, and has recently worked as an associate professor of psychology at the University of Texas, San Antonio.

**Dr. Clint Bowers** is a professor of psychology at the University of Central Florida. He is also director of the university’s RETRO Lab, a research laboratory dedicated to the study of technology-based learning. His interest lies in applying the science of learning to the design of serious games.

**Dr. Terry Chandler** is a technical advisor and senior manager for the L&TD group at SRA International. She has more than twenty years’ application development experience using cognitive-based modeling and simulation techniques for development of simulation-based intelligent tutoring systems, instructional games, scenario-based multimedia applications, virtual worlds, and mobile learning. Dr. Chandler holds a master’s degree in computer science and a PhD in education and has written more than thirty-four papers on topics in advanced education and training technologies to include ISD standards for serious games, high cognitive fidelity versus high physical fidelity, and simulation-based intelligent tutoring systems.

**Dr. Dustin Chertoff** is a research scientist at Intelligent Automation, Inc. He focuses on human-system interactions within virtual environments and the development of serious games. Dr. Chertoff completed his PhD in modeling and simulation, where he developed a virtual environment evaluation tool to measure holistic experiences.

**Mr. Eric Church** is lead serious game designer at BreakAway Games, where he is responsible for driving the vision for serious game products, ensuring they provide an

engaging experience equal to that of the entertainment games he designed previously. Mr. Church has led design on games with more than 20 million units sold, including *Call of Duty: Finest Hour*, *Medal of Honor: Frontline*, *Medal of Honor: Underground*, *Medal of Honor*, Clive Barker’s *Undying*, and *Spec Ops: US Army Rangers*, while working for Spark Unlimited, Electronic Arts, DreamWorks Interactive, Boss Game Studios, and Zombie Interactive.

**Mr. Dustin Clingman** is the founder and CEO of First5 Games, where he contributes directly to the design vision of the company’s products. An experienced designer, Mr. Clingman has contributed to the design and development of a range of products for all major gaming platforms. He is a lifetime member of the International Game Developers’ Association, for which he serves as chairman of the board of directors.

**Dr. Susan L. Coleman** is the chief performance officer for Intelligent Decision Systems, Inc. (IDSI). Although she began her career as a teacher in public schools, she has spent more than twenty years analyzing and designing training systems for the military. She earned a PhD in instructional technology and design. Dr. Coleman publishes research findings, presents at national conferences, and has been the lead writer on more than thirty technical reports.

**Mr. Jesús R. De León** has worked as an educator for two Florida districts for more than twenty-seven years and currently is an online instructor as well as a trainer for *Quest Atlantis/ARX* in the state of Florida. He has been integrating virtual worlds and videogame pedagogies in K-5 classrooms for the past five years. Mr. De León has a master’s degree in educational media design and technology from Full Sail University, Orlando.

**Dr. David Diller** is a senior scientist and group lead of the Immersive Training Technologies Group at Raytheon BBN Technologies, where he is focused on projects involving simulation- and game-based training, human behavior modeling, and artificial intelligence. Dr. Diller has led a variety of efforts developing training and other applications for the U.S. military, with systems deployed in the United States and overseas. Dr. Diller holds an MS in computer science and a joint PhD in cognitive science and cognitive psychology from Indiana University.

**Mr. Wallace Feurzeig** (1927–2013) was a principal scientist at Raytheon BBN Technologies and worked at BBN for fifty years on the development of powerful and compelling technology for learning and teaching in mathematics, computer programming, clinical medicine, and flight training. He directed the design and implementation of the first versions of the Logo educational programming language and the first Logo teaching experiments. He wrote several books, many chapter contributions, and hundreds of research papers and reports.

**Mr. Ed Fletcher** is an executive producer and has been at BreakAway Games since 2000. He has spent over 25 years in the games and serious games industries. He has worked as a project manager, designer, or programmer on dozens of games – many of them award-winning titles. Mr. Fletcher has a BS in electrical engineering from the University of Florida.

**Dr. Michael Freeman** is a senior program manager for Adayana Government Group, where he manages the training technology research and development contract in support

of the Combatting Terrorism Technical Support Office, U.S. Department of Defense. Dr. Freeman has a doctorate in vocational and technical education from Clemson University.

**Mr. Michael Guerrero** is a game industry transplant who has spent the past seven years lending his talents to the design and implementation of serious games at the MOVES Institute in Monterey, CA. He has published and presented innovative character animation techniques at IITSEC, won the best paper award at AIIDE, and contributed to publications in the *PSI Handbook of Virtual Environments for Training*. Mr. Guerrero holds a BS in computer science from the University of California, Santa Barbara, and an MS in interactive technology from Southern Methodist University.

**Ms. Erin Heiser** serves as program manager for SRA's Strategy and Performance Group and possesses twenty years of combined experience in program/project management, instructional systems design, and multimedia development. Ms. Heiser is experienced in the analysis, design, development, and evaluation of traditional, technology-based, and blended training programs, including Web- and computer-based training, intelligent tutoring and adaptive training solutions, game-based training, and interactive multimedia instruction. Ms. Heiser holds an undergraduate degree in social psychology and an MA in international relations, and is completing a leadership coaching certification at Georgetown University.

**Dr. Talib S. Hussain** is a senior scientist at Raytheon BBN Technologies with more than a decade of experience developing and testing training solutions for both humans and machines. He has developed serious games for the Army, Navy, and intelligence community, among others. As principal investigator for the ONR-sponsored Virtual Environment for Ship and Shore Experiential Learning (VESSEL) project, he led the development of authoring technology for games, the development and deployment of the *VESSEL Damage Control Trainer* game for Navy recruit training, and several empirical studies on games and learning. He holds a PhD in computer science from Queen's University in Kingston, Ontario, and has published more than forty publications.

**Mr. Isaac Jeppsen** is a senior producer at Engaged Learning. Mr. Jeppsen has more than ten years of technical, management, and entrepreneurial experience in complex interactive systems for training as well as operational domains, including working on the *Virtual Dental Implant Trainer* with BreakAway Games. Mr. Jeppsen has a BS in mathematics with an emphasis in scientific computing from the University of Utah.

**Dr. Tristan E. Johnson** is the director of online education in the Graduate School of Engineering at Northeastern University. He has been involved in numerous R&D projects including leading the development of two online/hybrid engineering professional graduate degrees; the design and development of instructional and performance certifications for technical operations within the Departments of Defense and Homeland Security; the design and development of online and blended learning solutions for U.S. and international universities; and the design and development of several technology support systems to support the use of ISD methodology for developing complex cognitive training tasks as well as use of a Navy-wide human performance technology support system.

**Dr. John J. Lee** is a senior researcher at the National Center for Research on Evaluation, Standards, and Student Testing at UCLA, where he has been working for the past

fourteen years. He works on assessment and evaluation projects for the military in various areas including tactical, shiphandling, and medical. He has a PhD in psychological studies in education from UCLA.

**Dr. Jo MacDonald** is a senior instructional designer and manager at General Dynamics Information Systems, overseeing a fifty-two-person curriculum development team working under contract to the Navy’s Center for Seabees and Facilities Engineering in Port Hueneme, CA. In the past twenty-four years, Dr. MacDonald has been immersed in all phases of instructional systems design, performing numerous analyses and evaluations and designing and developing countless technology applications for education and training, including PC-based simulations, learning games, Web-based training, highly interactive multimedia instruction, and instructor-led training. Dr. MacDonald views gaming as an essential tool in the instructional design toolbox, capable of engaging learners and driving them to explore and experiment with different strategies to solve dynamic problems.

**Mr. Howard Mall** is vice president of engineering at Engineering and Computer Simulations, Inc. He has been building simulation and training systems for nearly twenty years. He is currently involved in multiple engineering initiatives at ECS involving serious games, synchronous multimedia training, and mobile solutions.

**Mr. David Martz** is vice president of Muzzy Lane Software, where he is responsible for the company’s sales, marketing, and distribution strategies. Mr. Martz takes an active role in product development to ensure the company’s core technologies are aligned with this emerging market’s requirements. He earned his MBA from Boston University and was an undergraduate at the University of New Hampshire, where he majored in business administration.

**Ms. Caroline Masse** is a senior instructional designer at IDEAS, an innovation studio specializing in entertainment, learning, and marketing. She has been a part of their learning team for more than seven years, focusing on the design and development of story-based training solutions. She has a master’s degree in instructional technology/media with an emphasis in instructional systems design from the University of Central Florida.

**Mr. Perry McDowell** is a research associate at the MOVES Institute at the Naval Postgraduate School. He has created several games for training while serving as the executive director of the Delta3D open source game engine. He earned a master of science degree in computer science from the Naval Postgraduate School in 1995.

**Ms. Janine McGrath** has been an educator since 1988 working in Australia and the United States with preschool, elementary, middle school, and college-level students. She possesses a bachelor’s degree in elementary education and master’s degrees in educational technology and educational leadership. Ms. McGrath has been involved in training teachers in the use of technology in the classroom as well as using technology as an integral part of the curriculum.

**Ms. Jennifer McNamara** is vice president of serious games and strategic partnerships at BreakAway Games. She is responsible for managing the production of serious games products serving the corporate, defense, homeland security, and medical

communities. She has a master’s degree in education instructional systems design and development from the Pennsylvania State University.

**Dr. Ellen S. Menaker** is the chief of research and evaluation for Intelligent Decision Systems, Inc. Dr. Menaker has designed and directed numerous studies examining the impact of interventions on learning systems for various military, governmental, and educational institutions over the past thirty years. During the past three years, Dr. Menaker has provided instructional expertise to the *VESSEL Damage Control Trainer* development team.

**Mr. Kerry Moffitt** has worked as a scientist at Raytheon BBN Technologies since 2006. Before that he spent eleven years developing entertainment games; at BBN he applies the skills he honed in the game industry to make games for education and other serious applications. He holds a BA in computer science from the University of California at Berkeley.

**Mr. Curtiss Murphy** won Best Tutorial at I/ITSEC, the “Largest Modeling, Simulation, & Training Conference Worldwide,” but it is his obsession with the psychology of why games work that makes him a thought leader in the industry. He has been developing software for two decades, the more recent of which was spent developing training games. As a senior project engineer at Alion Science and Technology, Mr. Murphy was the lead designer for the *Damage Control Trainer*, an award-winning training game used by more than thirty-five thousand Navy recruits each year.

**Dr. Kara L. Orvis** is director of training and human performance at Pacific Science & Engineering Group with expertise in the areas of leadership, teams, and training technologies. At PSE, she leads research and development projects related to team and leadership assessment, formation, training, and development. She has served as the primary investigator on several Department of Defense serious game projects, including an Army effort to evaluate the effectiveness of VBS2 and a series of experiments for the Navy to investigate the influence of varying levels of game attributes on specific learning outcomes. Dr. Orvis holds an MA and a PhD in industrial/organizational psychology from George Mason University and a BA in psychology from Ohio Wesleyan University.

**Mr. John Ostwald** is a software developer for Raytheon BBN Technologies, where he has worked for the past eight years. He was the technical lead on the development of the *VESSEL Damage Control Trainer* and the VITAL Authoring Tool and has worked on a number of other serious games. He has a master’s degree in artificial intelligence from the University of Massachusetts, Amherst.

**Ms. Kelly Pounds** shares her passion for teaching and learning through her role as vice president of IDEAS Learning in Orlando, where she has worked as an instructional designer for twelve years. Her multidimensional career began with teaching in public school classrooms and continued as an instructional technology designer for the Disney University and manager of Organization Development at Hard Rock Café International. Her latest Web 2.0 project, TeacherStudio®, allows educators from member districts across the globe to gather in one professional learning community to share ideas, receive mentoring, and learn best practices.

**Ms. Katelyn Procci** is a sixth-year doctoral student in the Applied Experimental and Human Factors Psychology Program at the University of Central Florida in Orlando. She is also the research coordinator and project manager for the RETRO Lab, a serious games research and development laboratory, which is a part of the Institute for Simulation and Training and the UCF Department of Psychology. Ms. Procci is heavily involved in empirical research about games as well as ensuring effective design strategies are employed in the lab’s development efforts.

**Dr. Krista Langkamer Ratwani** is a senior scientist and the senior lead for Leader Development Capability at Aptima, Inc. Her work focuses on identifying leader and team skills in various contexts, as well as on determining the most effective training methods. Dr. Ratwani received her MA and PhD in industrial/organizational psychology from George Mason University.

**Mr. Bruce Roberts** is a lead scientist at Raytheon BBN Technologies, where he has been developing simulation-based intelligent tutoring systems and game-based training systems for more than thirty years. Recently, he was a principal investigator on the VESSEL project, which produced an award-winning game-based training system for damage control.

**Dr. Alicia Sanchez** serves as the games czar at Defense Acquisition University, where she oversees the development and deployment of learning games. Since joining DAU, Dr. Sanchez has delivered more than forty games for training and educational uses within formal, informal, and casual contexts. Since graduating with a PhD in modeling and simulation from the University of Central Florida, Dr. Sanchez has presented nationally and internationally and written several published articles and book chapters.

**Dr. Daniel Siegel** currently works as a course director for game strategies and motivation in the Educational Media Design and Technology Department at Full Sail University. He has taught a variety of trainees from elementary students to top-level executives at Fortune 500 companies. As an instructional designer, Dr. Siegel has developed courseware for a variety of industries and government organizations such as the U.S. Navy, Stanford University, Disney, Home Depot, and the Department of Education.

**Mr. Vance Souders** is a producer at BreakAway Games. He leads a distributed, multidisciplinary team focused on the creation of learning games and simulations across mobile, PC, and Web for clients including the Department of Defense, DARPA, major universities, and corporations. He has a BS in biology from Temple University in Philadelphia.

**Mr. Michael Thome** is a computer scientist for Raytheon BBN Technologies. He co-authored *Scripting Your World: The Official Guide to Second Life Scripting* and has been lecturing on virtual world development for the University of Washington since 2009. He has a master’s degree in cognitive and neural systems from Boston University.

**Mr. Tyler Vogel** is a game designer and producer for Muzzy Lane Software, Inc., a world leader in serious games. In his time at Muzzy Lane, Tyler has developed a half



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CONTRIBUTORS

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dozen games in a wide variety of subject areas, including math, business, science, and civics. He holds a master’s degree in education from the Harvard Graduate School of Education’s Technology, Innovation, and Education program, and is a Teach For America alumni.

**Mr. Robert E. Waters** is a lead game designer and has been with BreakAway Games since 2000. He has contributed to several BreakAway projects, including seven published entertainment titles and five serious game titles. Mr. Waters’s strengths include game mechanics and systems design, documentation, in-game text, research, and technical and creative writing. He earned a BA in English from the University of Memphis.

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