Virtual Immersive and 3D Learning Spaces: Emerging Technologies and Trends

Shalin Hai-Jew (Kansas State University, U.S.A)

Immersive learning has grown in popularity with the development of open-source immersive 3D learning spaces. Those in e-learning have been working to find ways to capitalize on immersive learning through simulations, digital kiosks, live virtual events, live interactivity, instructor-facilitated learning, AI-driven robots, and hyper-realistic experiences.

Virtual Immersive and 3D Learning Spaces: Emerging Technologies and Trends helps push the conceptual and applied boundaries of virtual immersive learning. Virtual immersive spaces bring with them plenty of promise, of sensory information-rich learning experiences that will enable a much wider range of experiential learning and training—delivered to computer desktops, augmented reality spaces, digital installations, and mobile projective devices. This work explains how these spaces may be exploited for effective learning in terms of the technologies, pedagogical strategies, and directions.

Topics Covered:

- 3D Collaborative Interfaces
- Designing and building 3D immersive virtual learning
- Immersive language learning
- Learning assignments in virtual worlds
- Legal and ethical aspects of teaching in selected social virtual worlds
- Non-visual spatial learning
- Scaffolding discovery learning in 3D virtual environments
- Serious games for healthcare education
- Signing avatars
- Virtual worlds

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.
Section 1: Virtual Immersive Spaces and their Popularization

Chapter 1
Assessing the Application of 3D Collaborative Interfaces within an Immersive Virtual University
McArdle Gavin (University College Dublin, Ireland)
Schön Bianca (University College Dublin, Ireland)
Bertolotto Michela (University College Dublin, Ireland)

Chapter 2
Virtual Worlds:
Lithgow Catherine M. J. (University of Maryland Baltimore County)
Wolf Jadi L. Davidson (University of Maryland Baltimore County)
Berge Zane L. (University of Maryland Baltimore County)

Section 2: Immersive Learning Strategies

Chapter 3
Practice What You Preach:
Benvenuti Laura (Open Universiteit Nederland)
van der Veer Gerrit C. (Open Universiteit Nederland)

Chapter 4
Learning Assignments in Virtual Worlds:
Adams Tania (University Duisburg-Essen, Germany)
Ojstersek Nadine (University Duisburg-Essen, Germany)
Natland Axel (University Duisburg-Essen, Germany)
Kerres Michael (University Duisburg-Essen, Germany)

Chapter 5
Immersive Language Learning in Collaborative Virtual Environments:
Shih Ya-Chun (National Dong Hwa University, Taiwan)

Chapter 6
Unpacking Strong versus Weak Presence in Second Life Exactive Role Play
Ho Caroline M. L. (Nanyang Technological University, Singapore)

Section 3: The Design of 3D Immersive Spaces

Chapter 7
Collaborating in Learns:
Matzen Nita J. (Appalachian State University, USA)
Roberts William Edward (Appalachian State University, USA)
Barke Perry (Ashe County Schools, USA)
Marklin Julie (Davie County Schools, USA)

Chapter 8
Scaffolding Discovery Learning In 3D Virtual Environments:
Lee Mark J. W. (Charles Sturt University, Australia)
Dalgarno Barney (Charles Sturt University, Australia)

Section 4: Technological Accessibility Functionalities

Chapter 12
A Computational Model of Non-Visual Spatial Learning
Patel Kanubhai K. (Ahmedabad University, India)
Vij Sanjay Kumar (SVIT, India)

Chapter 13
Signing Avatars
Adamo-Villani Nicoletta (Purdue University)
Hayward Kyle (Purdue University)

Section 5: Risks in the Immersive Learning

Chapter 14
Crouching Tangents, Hidden Danger:
Garcia-Ruiz Miguel A. (University of Colima, Mexico)
Tashiro Jarshiro (University of Ontario Institute of Technology, Canada)
Kapralos Bill (University of Ontario Institute of Technology, Canada)
Martin Miguel Vargas (University of Ontario Institute of Technology, Canada)

Chapter 15
Mitigating Negative Learning in Immersive Spaces and Simulations
Hai-Jew Shalin (Kansas State University)

Order Your Copy Today!

Name: ________________________________
Organization: ________________________________
Address: ________________________________
City, State, Zip: ________________________________
Country: ________________________________
Tel: ________________________________
Fax: ________________________________
E-mail: ________________________________

☐ Enclosed is check payable to IGI Global in US Dollars, drawn on a US-based bank

☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: ________________________________
Name on Card: ________________________________
Account #: ________________________________
Expiration Date: ________________________________