Cases on 3D Technology Application and Integration in Education

Kimberely Fletcher Nettleton (Morehead State University, USA) and Lesia Lennex (Morehead State University, USA)

Cases on 3D Technology Application and Integration in Education highlights the use of 3D technologies in the educational environment and the future prospects of adaption and evolution beyond the traditional methods of teaching. This comprehensive collection of research aims to provide instructors and researchers with a solid foundation of information on 3D technology.

Topics Covered:
- 3D Technology
- 3D Virtual Environment
- Design Principles
- Educational Robotics
- Instructional Development and Practice
- Social Learning Environment
- Theories and Models

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.

Kimberely Fletcher Nettleton has taught at both the middle and elementary school level and loved every minute in the classroom. She was a principal at a K-8 school before becoming an instructor at Morehead State University, where she teaches Classroom Management and Assessment. She is a firm believer in the healing power of chocolate. She is the Director of the Professional Development School at Morehead. She received her BA from the University of Kentucky, an MA in elementary education from Georgetown College, and a second MA in School Administration from Morehead State University. She is finishing her doctoral work in Instructional Design and Technology at the University of Kentucky.
Section 1: Theories and Models: Design Hypothesis, Design Principles, Theoretical Underpinnings

Chapter 1
Students’ Perceptions of a 3D Virtual Environment Designed for Metacognitive and Self-Regulated Learning in Science
Clarke-Midura Jody (Harvard University, USA)
Garduño Eugenia (Harvard University, USA)

Chapter 2
Analyzing the Effects of a 3D Online Virtual Museum in Visitors’ Discourse, Attitudes, Preferences, and Knowledge Acquisition
D’Alba Adriana (University of North Texas, USA)
Jones Greg (University of North Texas, USA)

Section 2: Design of the Product/Model

Chapter 3
Do 3D Pedagogical Agents Help Students Learn Science?
Schroeder Noah L. (Washington State University, USA)
Adesope Olusola O. (Washington State University, USA)

Chapter 4
3D Video Production in Education
Wilson Jay (University of Saskatchewan, Canada)
Scott Stefan (University of Saskatchewan, Canada)

Section 3: Instructional Development and Practice

Chapter 5
Student Learning Experiences through CoSpace Educational Robotics:
Eguchi Amy (Bloomfield College, USA)
Shen Jiayao (Singapore Polytechnic, Singapore)

Chapter 6
3D Science and Social Studies in Grades 5-6:
Bodenlos Emily (Morehead State University, USA)
Lennon Lesia (Morehead State University, USA)

Chapter 7
Developing 3D Case Studies for Authentic Learning Experiences
Lavin Joanne (City University of New York, USA)
Bai Xin (City University of New York, USA)

Chapter 8
3D Virtual Worlds as Creative Pedagogy for Art Education
Lu Lilly (Northern Illinois University, USA)

Section 4: Evaluation in Design and Development Research

Chapter 9
3D Technology in P12 Education:
Spencer Karla (Morehead State University, USA)
Lennon Lesia (Morehead State University, USA)

Section 5: Reporting Design and Development Research

Chapter 10
Earth System Science in Three Dimensions:
Marrero Meghan E. (Mercy College, USA)
Schuster Glen (U.S. Satellite Laboratory, USA)
Bickerstaff Amanda (CUNY Graduate Center, USA)

Chapter 11
Stereoscopic 3D:
Barba Ian (Texas Tech University, USA)
Brewer James (Texas Tech University, USA)
Swinford Brenda (Texas Tech University, USA)

Chapter 12
Using 3D Virtual Reality Technology in Cyber Ethics Education:
Matsuda Toshiki (Tokyo Institute of Technology, Japan)
Nakayama Hiroshi (Tokyo Denki University, Japan)
Tamada Kazue (Edogawa University, Japan)

Chapter 13
Taking Elementary Document Camera Use to the Next Dimension
Blair Nancye W. (The Schools of McKeel Academy, USA)

Section 6: Best Practices in Education

Chapter 14
Using Second Life® to Teach Collaboration Skills to Pre-Service and In-Service Special Educators
Hartley Melissa D. (West Virginia University, USA)
Ludlow Barbara L. (West Virginia University, USA)
Duff Michael C. (Discover Video Productions, USA)

Chapter 15
3D Modeling in a High School Computer Visualization Class:
Combs Rebecca M (Humana Inc., USA)
Manzor Joan (University of Kentucky, USA)

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