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Soggetti	Video games - Programming Educational technology Software engineering Education - Data processing User interfaces (Computer systems) Human-computer interaction Game Development Digital Education and Educational Technology Software Engineering Computers and Education User Interfaces and Human Computer Interaction
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Livello bibliografico	Monografia
Nota di contenuto	Part I: PLAY: Game-Based Learning for Engagement and Skills Development -- 1. A playful and transformative approach to Learning -- 2. Collaborative World-building as Problem-Solving: The Role of Tabletop Role-Playing Games in Sustainability Education -- 3. Using Tangible and Hybrid Interfaces to Address Student Collaboration and Mistakes in K-5 Computational Thinking Games -- 4. Exploring Digital Escape Room Games as Training Environments for Collaborative Problem-Solving Skills in Engineering Education -- Part II: LEARN: Designing Educational Games for Sustainability and Systems Thinking -- 5. Beyond Human-Centric Play: A Review of Commercial Video Games to Inform More-Than-Human Serious Game Design -- 6.

Students as Partners in Designing Educational Games for Sustainability: A Case Study from a Higher Education Institution in Pakistan -- 7. Forest SaVR – A Virtual-Reality Serious Game to Raise Awareness of Deforestation -- 8. Engineering Efficient and Robust Quest Systems for Educational Games by Considering Quest Theories and the Learning Domains -- Part III: TRANSFORM: Games for Policy, Inclusion, and Environmental Awareness -- 9. Exploring the potential of games design for policy making: review and applications -- 10. Serious game on serious problems – card-game on ESG information communication -- 11. From Deficiency to Proficiency in Engineering Education: Gamification for Sustainable Learning with CIAO! Course -- 12. The Cat's Quest for Connection: A Case of Game Design as a Path for Accessible Culture with Students, Communities, and Museums -- 13. Comparing a Serious Game for Promoting Museum Visitors' Engagement and the Traditional Guided Museum Visit.

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## Sommario/riassunto

This book explores innovative approaches to educational game development, emphasizing practical solutions and transformative learning experiences. As learning increasingly converges with digital culture, game-based learning and serious games offer compelling ways to spark curiosity, cultivate systems thinking and resilience, and create inclusive, sustainable educational experiences. The book is organized into three parts, Play, Learn, and Transform, which are deliberately interwoven, reflecting the fluid and iterative nature of game-based learning as a holistic approach to education and social change. First, Play advocates for a transformation in educational paradigms towards active, experiential, and playful learning methodologies. The four chapters showcase a variety of strategies to stimulate engagement, starting with hybrid settings and concluding with digital scenarios. Next, Learn delves into the intersection of educational game design and sustainability. Here, the chapters challenge conventional paradigms by introducing more-than-human perspectives, co-creative approaches, and immersive narratives. Lastly, Transform moves towards the broader societal impact of serious games, highlighting their potential in shaping policy, fostering inclusion, and enhancing public understanding of environmental and governance issues. The chapters in this part underscore how games engage diverse audiences and support collaborative learning and reveal how they can become platforms for collective inquiry, systemic reflection, and social change. This book is intended for those committed to advancing education through purposeful play, whether being a researcher seeking theoretical insights, an educator designing a curriculum or a class intervention, or a developer building the next generation of educational tools. Collectively, the works in this volume reaffirm that game-based learning is not merely a pedagogical technique but a medium for meaningful exploration, practicing collaboration, and supporting transformative learning.

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