The Future of Immersive Learning in EMS

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SIX RIGHTS OF XR ADOPTION IN EDUCATION

Right Pedagogy
Right Software
Right Hardware
Right Space
Right Pricing
Right Return on Investment

VR
Online Learning
Empathy
Simulation
Metaverse

PRESENCE
EMODIMENT
AGENCY
Slide 7

PRESENCE

The illusion of being somewhere while knowing that you’re not.

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EMODIMENT

Acknowledging the existence of “your” body with the VR world.

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AGENCY

The capacity to act in, and influence, an artificial environment.

No agency   Local agency   Global agency
EMPATHY
ONLINE LEARNING
SIMULATION

"VR CREATES EXPERIENCES. EXPERIENCES CAN CAUSE EMPATHY"
Jeremy Bailenson

AUTISM
EMPATHY
BECOMING HOMELESS
ALZHEIMERS
CULTURAL DE-BIASING
First paramedic students in the world to present their research about virtual reality in virtual reality

Research Presentation

VR Conference Exhibit Hall
% steps done correctly VR vs Standard: 63% vs 25%. Higher knowledge retention in VR group: 50% vs 11% - Blumstein, G. et al.
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Medical simulation
Single player
Team Leader - Voice commands
Team members carry our orders

- no agency
- psychomotor
- Higher order thinking

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Voice recognition & Artificial Intelligence

Video

Slide 27

Voice recognition
AI

patient communication simulator

- Soft skills
- high yield
FUTURE OF XR IN EMS
PEDAGOGY BEFORE TECHNOLOGY
HIGH PRESENCE, EMBODIMENT, AGENCY?
VOICE & PHYSICAL INTERACTION + AI
ANALYTICS, BIOMETRICS?
EXPLORE & ENGAGE VENDORS

Thank You!
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References:

Synopsis: “The percentage of steps completed correctly was significantly higher in the VR group compared to the SG group (63% vs. 25%, p < 0.002). Higher knowledge retention in the VR group: 50% vs 11%)”

Huang, K., Ball, C., Francis, J., Ratan, R., Boumis, J., & Fordham, J. (2019, 02). Augmented Versus Virtual Reality in Education: An Exploratory Study Examining Science Knowledge Retention When Using Augmented Reality/Virtual


Link to Literature Search Findings

Link to VR applications (see Med Patient Sim)

Links to videos of medical apps