

*Education on the Horizon: Teaching  
and Learning with Technology*

# Week 4: Embodied Learning

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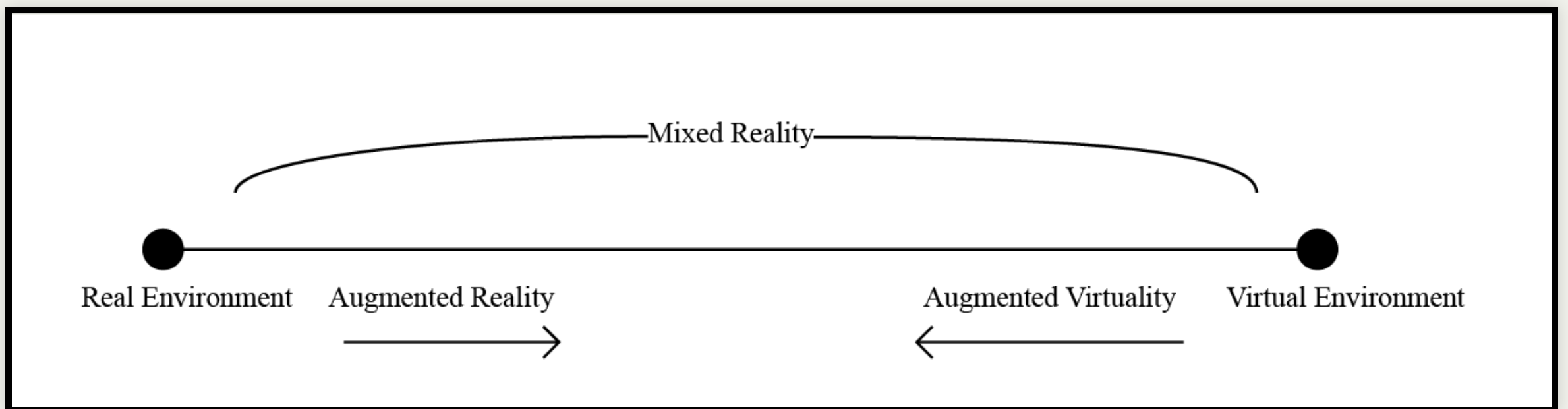


# Clarification of Terms

# Virtuality vs. Reality

- Virtuality is commonly regarded as a self-consistent, fully synthetic world that doesn't have to follow the laws of physics of real world.
- Virtuality and reality are not opposites, but more like two ends of a continuum

# Mixed Reality (MR)



- Real and virtual world objects are presented and experienced together within a single display.

# Extended Reality (XR)

- An emerging umbrella term for all the immersive technologies, the ones we already have today plus those that are still to be created.

# Metaverse

- XR supported social networking
- Introducing the Metaverse
- Introducing the Icelandverse

# VR the technology

VR app → Game Engine → VR head-mounted device  
(HMD)

# VR the experience

- VR is the virtual recreation of the physical reality we live in.
- VR > Virtuality / Reality



VR > Virtuality

# Rubber hand illusion

# VR > Virtuality

- VR experience is "embodied" through the virtual body ("avatar")

VR > Reality

VR classroom

# VR > Reality

- Controlled, standardized, individualized environment
- Step-wise training

# Demo: Immersive VR

- multi-sensory realistic experience inside an virtual environment
- ideal for training situational, adaptive, and complex skills



Source: AirForceTimes.com



Source: Bionest.com



Source: Walmart

# Demo: 360 video

- 360 video



# Demo: *Augmented reality*

- augmenting a real world experience with virtual objects.
  - Learning to draw with AR

# Demo: Augmented virtuality

- augmenting an virtual experience with real-life objects.
  - Learning with Google Earth



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