Virtual and Augmented Reality: Stepping Into the New Frontier of Learning

Maya Georgieva & Emory Craig
Digital Bodies

Virtual Reality and the Future of Learning Lab in New York

Conference Talks | Master Classes | Workshops | Research | VR and AR Playgrounds | Design Thinking | Digital Storytelling | Higher Education Futures and Digital Learning Strategy

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Today’s Webinar

Recent and Upcoming AR and VR Developments

Immersive Experiences and Learning

Projects and Emerging Practices

Challenges

Future of VR/AR and Education
Poll: Your VR and AR Experience

Have you tried Virtual Reality? Check all that apply.

a. Yes, I have tried Mobile VR
   (Google Cardboard, GearVR, Google Daydream or similar)

b. Yes, I have tried midrange to high-end VR
   (PlayStation VR, Oculus Rift, HTC Vive)

c. Yes, I have tried Mixed Reality devices
   (Microsoft HoloLens, Meta Glasses, or other Smart Glasses)

d. No
Poll: Your VR and AR Experience

What kind of devices are available on your campus or organization? Check all that apply.

a. Google Cardboard
b. Gear VR, Google Daydream or similar device
c. PlayStation VR
d. Oculus Rift
e. HTC Vive
f. Microsoft HoloLens
g. Other
ELI Webinar
@EDUCAUSELI

Recent and Upcoming Developments

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
VIRTUAL REALITY (VR)

Completely digital environment

AUGMENTED REALITY (AR)

Real world with digital information overlay

MERGED REALITY (MR)

Real and the virtual are intertwined

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Google Daydream View and Samsung Gear VR

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Microsoft VR Headsets

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Mixed Reality: Microsoft HoloLens and Meta

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Facebook VR Developments

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Augmented Reality

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
VR Cameras

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Immersive Experiences and Learning
Learning Sciences

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Experiential Learning

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Games and AI

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Storytelling
Poll: Institutional Projects

In what area does your campus/organization has a VR/AR project?

a. Makerspaces
b. Advanced research
c. Digital Humanities / Digital Literacy
d. Medical or healthcare education
e. STEM education
f. Student as creators projects
g. Individual faculty initiatives
h. Online Learning
i. Other

www.DigitalBodies.net @DigitalBodies @mayaig & @emorycraig
Poll: Institutional Projects

What is the timeline for your campus to experiment with Virtual or Augmented Reality?

a. We have implemented one or more VR/AR projects
b. We are currently experimenting with VR and/or AR
c. Planning to start in the coming year
d. Just initial conversations now, no earlier than two years
e. On the roadmap in the next 3 - 5 years
f. No current plans
Featured Projects
Journalism and New Media

- A Classic Circus Folds Its Tent
- The Very Tiny Dancers
- Life on Mars: Get to Know the Crew
- Florida’s Forgotten ‘Above-Ground’ Railroad
- It’s a Small, Small, Small World
- A Border Town’s Fragile Revival
- Selfie Lessons From a Chimp (She Stole Our Camera)
- Firsthand Account: The Assassination of Malcolm X

www.DigitalBodies.net
@DigitalBodies @mayaig & @emorycraig
Digital Humanities

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
The Crystal Reef
Microsoft HoloLens and HoloPatient by Pearson

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Blood Cells - NYU Tandon Labs VR Game

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
VR and Online Learning
Experiential and Immersive Learning

Virtual Field Trips
3D Simulations
Interactive Storytelling
Social VR
Embodied Cognition
Visualization & Data Science
Games and World Building

www.DigitalBodies.net
@DigitalBodies @mayaig & @emorycraig
Emerging Practices and Strategies

@EDUCAUSEELI

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Designing for Virtual Reality
Kickstarting Your Project

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Spaces: Classrooms, Labs, Makerspaces & Research

www.DigitalBodies.net  @DigitalBodies @mayaig & @emorycraig
Challenges

ELI Webinar
@EDUCAUSELI

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Ethical Issues
Future of VR/AR and Education

Continued improvements in...
- Power efficiency
- Pixel density & quality
- Sound quality
- Intuitive interactions
- Cost efficiency

www.DigitalBodies.net
@DigitalBodies @mayaig & @emorycraig
The Vision

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
The New Frontier of Learning

Presence and Immersion

Interactivity and Engagement

Design of Learning Experiences

New forms of Assessment

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig
Questions
Virtual and Augmented Reality: Stepping Into the New Frontier of Learning

Maya Georgieva & Emory Craig
Digital Bodies

Virtual Reality and the Future of Learning Lab in New York

Conference Talks | Master Classes | Workshops | Research | VR and AR Playgrounds | Design Thinking | Digital Storytelling | Higher Education Futures and Digital Learning Strategy

www.DigitalBodies.net

@DigitalBodies @mayaig & @emorycraig