Cyberlearning Project in Progress:
DEVELOPING INTERCULTURAL LEADERSHIP COMPETENCIES THROUGH VIRTUAL REALITY

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Background and Context of the Cyberlearning Project

**Increased globalization requires U.S. college STEM graduates to develop not just technical competencies in their specific disciplines but also key soft skills that are critical for job-readiness and career success.**

- **Key Challenge – Finding a Balance**
  - Economic and logistical constraints on the one hand
  - Evidence-based best practices on the other (experiential education, guided reflection, safe learning environments, individualized feedback)

- **Bi-Directional Problem**
  - STEM fields need more and better instruction in soft skills
  - Intercultural leadership competency curricula need technology in order to scale beyond the few students who study abroad
Virtual Reality Immersive Learning Environment

• VR is now a commonly used pedagogical tool in technical fields
  • Engineering, medicine, chemistry, aeronautics

• Immersive online learning environments have demonstrated capacity for soft skills development
  • MMPOGs, virtual military simulations, immersive second language learning environments

• VR stimulates active, experiential learning
  • Longer retention and faster recall than passive information transference
Project Goals

- **Goal 1**: To evaluate the impact of VR interventions on student growth in *empathy, curiosity, and openness*.

- **Goal 2**: To compare learner reactions to two types of VR media, *CGI versus 360-degree videos* of human actors.

- **Goal 3**: To advance research methods for the social sciences by triangulating data from self-report measures with *biometric data* from non-invasive devices that monitor involuntary biological indicators of emotion and engagement.
Project Overview

Adapted from the Intercultural Development Continuum (Hammer, 2012)
Project Deliverables

• **Develop sample VR simulations.** Six VR simulations – three storylines produced in each of two different genres of VR technologies (CGI versus 360-degree videos of human actors)

• **Study the educational impact of VR experiences.** Three phase mixed-methods research design
  • Quasi-experimental pre/post test design study of intervention effectiveness
  • Phenomenological study to understand learner experiences
  • Triangulation of biometrics with traditional measures

• **Disseminate the VR simulations and findings.**
Project Impacts

• **Innovation**
  - Of the pedagogy of intercultural leadership competency development
  - Of the uses of VR to the social sciences
  - Of research methods in the scholarship of teaching and learning

• **Personal and Societal Impacts**
  - Learners develop greater empathy, curiosity, and openness
  - Future workforce more capable of effective intercultural teamwork
  - Empathy and openness also address broader issues such as social justice
Questions & Comments?

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