Case Study in VR Content Generation for Clemson University Center for Workforce Development

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4 Pillars of Workforce Development

1. Digital Learning
Digital tools to increase access to information using virtual reality and e-learning
Visit EducateWorkforce.com

2. Career Pathways, College Affordability & Graduation Improvement
Scholarship opportunities, articulation programs, and stackable certificate options for postsecondary education

3. K-12 STEM Education Initiatives
Recruitment, professional development, student engagement, and outreach and support

4. Research, Advocacy & Networking
Education, industry research, organizations and the public to create awareness of workforce development challenges and resources
Innovative Curriculum Development

Types of content:

Video Lecture
Engaging for visual and auditory learners

Virtual Reality
Simulations serve as online labs to engage with material

Open Text
Robust textbooks for all courses, ebooks available on request.

Assessments
Reinforcement of learning materials through immediate feedback
Defining Virtual Reality

Virtual Reality
- Uses interactive 3D graphics
- Simulates scenarios
- Used in a variety of domains

Classifications
- Desktop
- Immersive
- Augmented
Utilizing WebGL

- Browsers no longer support plugins
  - Improved security, speed, and stability
- WebGL runs 3D content directly in the browser without using plugins
- Features not fully supported yet
Safety Hazard Identification
Wind Survey
Fluid Lines & Fittings

Welcome to the Rigid Fluid Lines and Fittings module! Click "Next Step" to continue.

Fabricating Rigid Fluid Lines
Aircraft Electrical Troubleshooting
Bimanual Metrology Simulation
Next Steps and Challenges:

- Analytics of student performance inside of virtual reality
- AI: Context based real-time simulations
- Unity 3D simulations: are they future proof and platform agnostic?
The Center for Aviation and Automotive Technological Education Using Virtual E-Schools

Questions?

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