Teaching risk management to human performance students by using virtual reality simulations

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Overview

- Background
- Pilot test & upgrades
- Survey results
- Next steps
Background

- Worked with Acadicus software & college IT director
- Built out soccer stadium
- Realistic but low stakes setting in recognizing & managing risks
Pilot Test Spring 2022

Set up:
- 32 students
- No headsets
- They were in simulation by themselves
- Started in this scene, stadium entry
- Asked them to look for risks
- Then could load into inside stadium scene
Scene 2

- Inside stadium scene
- They could move to any part of stadium, field, seats, or concourse
- Lightning strike in this scene
- Completed a survey about experience
Upgrades based on survey feedback

- Added instructions & “safety issue” buttons
- Added multiple choice questions w/explanations
- Changed sky to cloudy & moved lightning
- 75% thought it was moderately or highly useful
- 87.5% of students recommended that I keep using simulations
Two people have been struck by lightning during the game. Please answer the multiple choice question. Then review the flow chart and then check the vitals on the injured people.

Fall 2022 Simulation Set up

- 5 students in VR headsets
- Students in headsets are in simulation simultaneously
- 5 other students observing, then switched roles
- Guided 28 students through simulation
F22 Survey Results

- 82% extremely or moderately easy to navigate
- 67% extremely or moderately realistic
- 85% extremely or moderately useful
- 100% highly or moderately recommend
F22 Survey Results:
Strengths

- Realism
- Immersive
- “Active Learning”
F22 Survey
Results:
Areas for improvement

• Interaction w/assets
• Technology glitches
• Better resolution for text/images
Next steps

• Debrief activity via recording and/or
• Build it out to graded EAP role play
• Build out 2\textsuperscript{nd} simulation- marathon bombing
Questions?

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