

# **Integrating Virtual Reality in an Institutional Healthcare Education Research Online Conference**

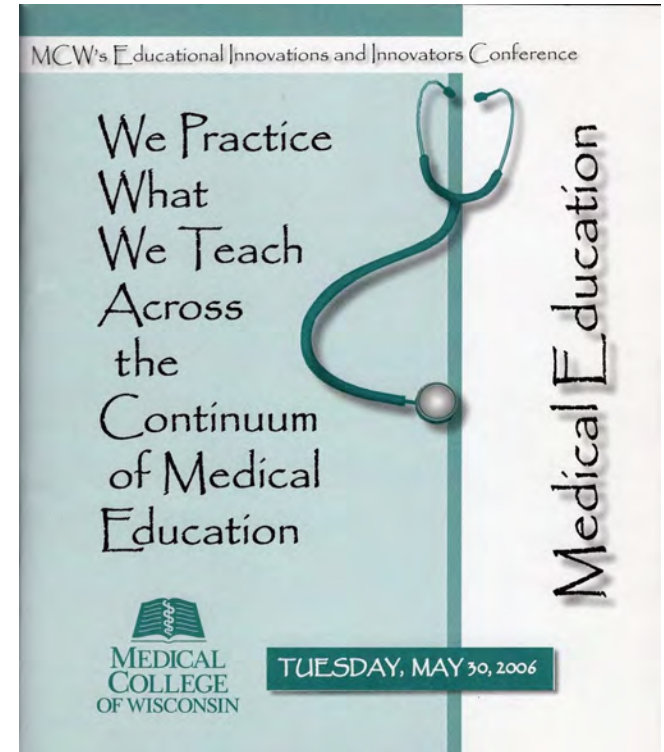
**Presenter: Robert Treat PhD**

**Co-authors: Amy Prunuske PhD | Austin Gerdes MPH | Rachel Kavanaugh PharmD, BCACP**

I affirm that all persons involved in the planning/content development do not have relevant financial relationships with pharmaceutical companies, biomedical device manufacturers or distributors, or others whose products or services may be considered related to the subject matter of the educational activity.

➤ 2006 Prototype of MCW IHER Conference

- Tuesday May 30 @ 3:30 - 8:00 PM
- HRC 1210-1250 and Kerrigan Auditorium
- 1 plenary speaker, Paul Hemmer MD
- 3 panel sessions
- 64 medical education poster presentations
- Event Sponsors
  - ❖ Society of Teaching Scholars
  - ❖ Office of Educational Services



➤ 2014 Inaugural Version of MCW IHER Conference

- Wednesday Jun 18 @ 1:30 - 5:30 PM
- Alumni Center
- 1 plenary, 12 oral presentations, and 18 poster presentations in medical education
- Event Sponsor: Office of Academic Affairs
- Chair: William J. Hueston MD



➤ 2020 Online Version of MCW IHER Conference

- Thursday, Sep 24 @ 8:00-4:00 PM
- Friday, Sep 25 @ 9:00-12:00 PM
- Online in Zoom
- 1 plenary, 1 panel session, 1 workshop, 12 oral presentations, 18 poster presentations, 9 Kern TI2 presentations
- Event Sponsor: Office of Academic Affairs
- Plenary Sponsor: Kern Institute
- Chairs: Robert Treat PhD, Amy Prunuske PhD





- The Sep 2020 Association for Medical Education (AMEE) in Europe conference
  - First med ed meeting to transition online due to pandemic
  - Used VR environment with 3D avatars

- By 2021, teleconferencing fatigue emerged<sup>1</sup>
- Alternatives to 2-D interfaces<sup>2</sup> were evaluated by the authors



1. Bailenson, Jeremy N. Nonverbal Overload: A Theoretical Argument for the Causes of Zoom Fatigue. Technology, Mind, and Behavior, 2021;2(1): No Pagination Specified. doi:10.1037/tmb0000030.

2. Goedele Roos, Julianna Oláh, Rebecca Ingle, Rika Kobayashi, Milica Feldt, Online Conferences - Towards a New (Virtual) Reality, Computational and Theoretical Chemistry 2020;1189:112975 <https://doi.org/10.1016/j.comptc.2020.112975>



- The use of virtual reality (VR) for some online poster presentations was implemented at the three-day 2021 IHER conference
- Enhance social interactions and better emulate in-person presentations.<sup>3</sup>
- VR Design Criteria



Ease of Use



Avatar Structure



Headset Enabled



Cost

3. Fuochi, Giulia, Voci, Alberto. A deeper look at the relationship between dispositional mindfulness and empathy: Meditation experience as a moderator and dereification processes as mediators. *Personality and Individual Differences*. 2020;165. doi:10.1016/j.paid.2020.110122.











A virtual reality scene featuring a man in the foreground wearing a black t-shirt with a white 'E' logo. In the background, a group of diverse people are sitting on a set of wide, grey concrete steps. The scene is set outdoors with a modern building and a large tree in the distance. A semi-transparent black box with the 'ENGAGE' logo and tagline is centered over the image. Blue wavy lines are visible in the bottom left corner.

# ENGAGE

REAL BUSINESS DONE VIRTUALLY

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Lecture Hall



Conference Hall



Expo Hall...



Martian Surface



360 Video Room



Meeting Room



Ancient Avebury



Hub Space

Navigation controls: back, forward, and a sequence of numbers 1, 2, 3, 4, followed by an ellipsis and more navigation icons.



- Cost for a Virbela password-protected team suite was \$100 for every 10 people per month included:
  - Phase-shifting seating configurations
  - Protected private volume areas
  - Three digital presentation boards
  - 3D-spatialized audio
- The customizable avatars had built-in functions:



Chat



Interacting with  
Presentation Boards



Gesturing



Team Suite

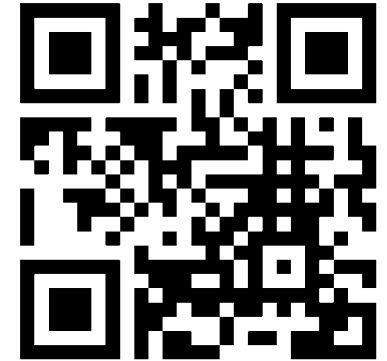


- Virbela was created by Alex Howland, PhD
  - Future of work
  - Role of metaverse





- Purpose: To examine the impact of a virtual reality poster presentation on an institutional online conference in healthcare education research.

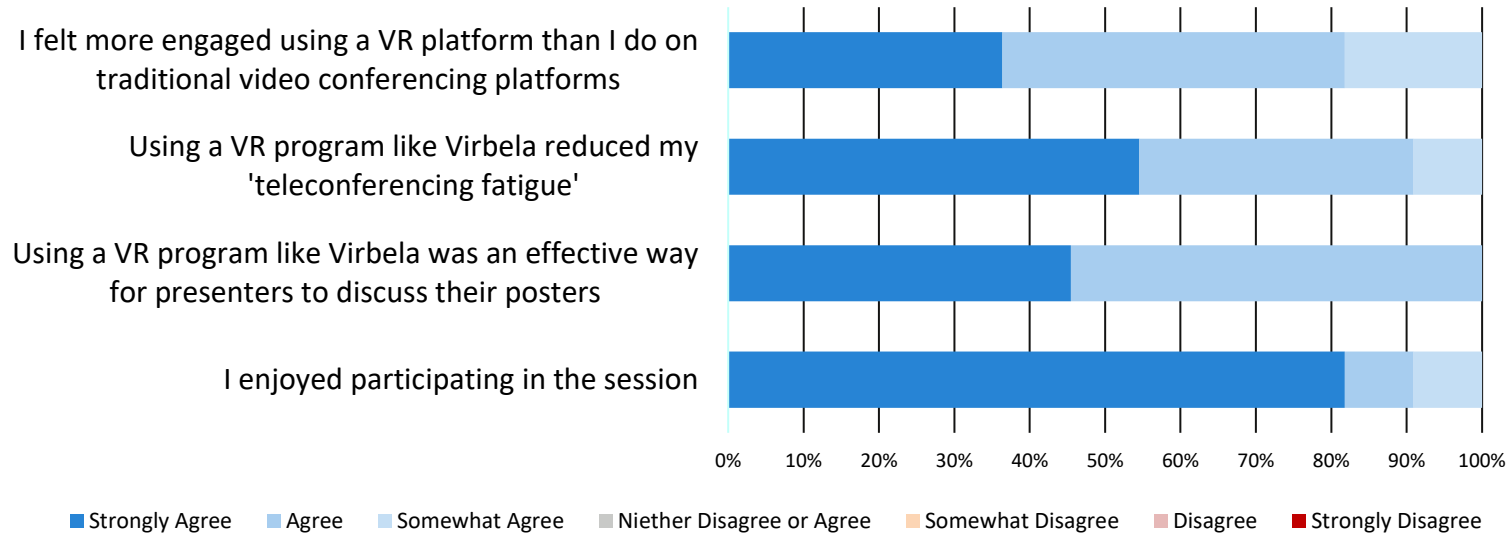


Virbela QR Code

- In 2021, 181 participants attended IHER conference
- 20 participants attended VR session
- First time use of VR speed poster presentation platform
- Four-item survey on 7-pt scale (1=SA, 7=SD)
- IBM® SPSS® 26.0 used for analysis



**Fig 1:** Speed Poster Virtual Reality Session



**Fig 2: VR Participant Survey Responses**

- The VR session was rated to . . .
  - Be an effective poster presentation platform (median=6.0)
  - Reduce teleconferencing fatigue (median=6.0)
  - Be more engaging than Zoom (median=6.0)

- Satisfaction was significantly correlated ( $p < 0.050$ ) with . . .
  - Effectiveness ( $\rho = 0.5$ )
  - Reducing fatigue ( $\rho = 0.7$ )

- The VR session was an effective poster presentation platform
- The VR presentations were executed with no logistical problems but with only 11% of all conference participants.
- One-on-one conversations were reported to be easier to have than in Zoom.
- Time required 10 hours of configuration and testing by conference organizers, but individual presenter accounts required only 20 minutes of setup.

If you only remember one thing from this session it could be that . . .

VR speed-poster sessions provided an engaging and entertaining alternative to traditional commercial software and should be considered for future presentations.

Inquiries go to . . .

Robert Treat PhD at: [rtreat@mcw.edu](mailto:rtreat@mcw.edu)