Nurse education in the virtual environment. "From one reality to another"

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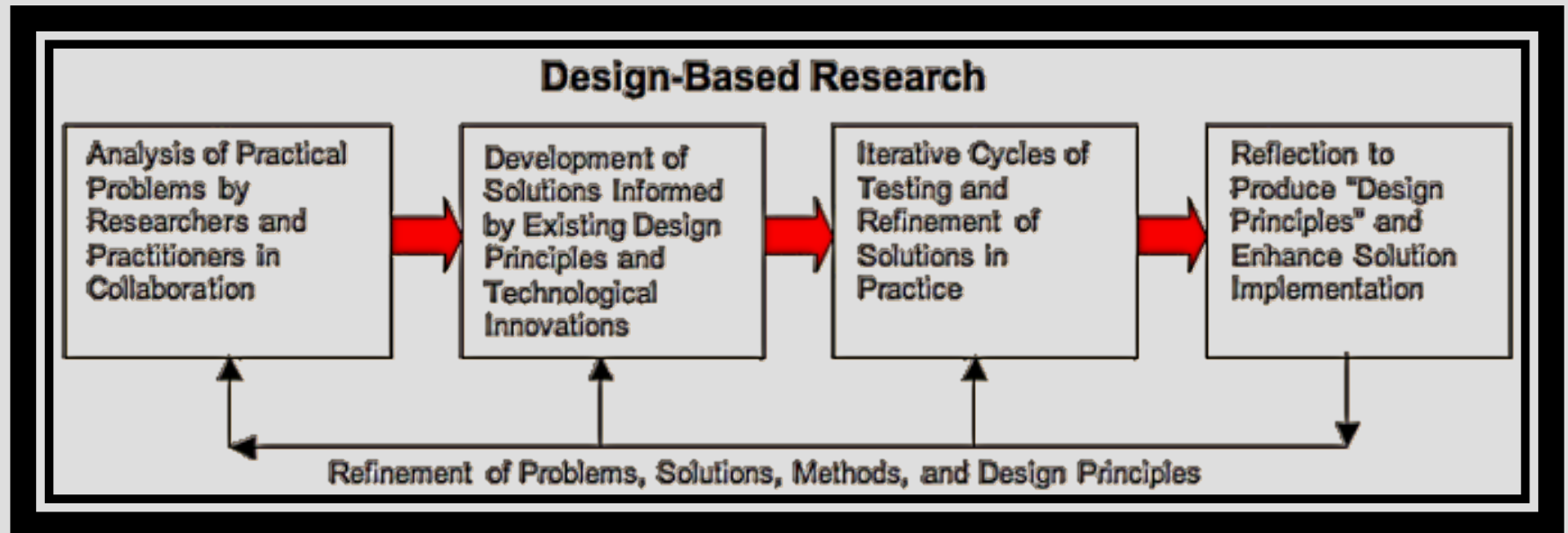
Changing Landscape of Education

Simulation

- "a technique… to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner."
- Simulation and immersive learning tools provide advantages over traditional teaching delivery methods by engaging students in structured, yet realistic settings that stimulate interest and enthusiasm for the subject matter.
- Disadvantages
  » Not real
  » No body language cues
  » If unrealistic, students may be minimally engaged

Project Goals

- Studies show implementation of immersive simulation technologies to be attractive and highly motivating to today's generation of students, serving to improve education provider's student retention and participation.

- Stage 1 – Development of the blended environment
- This part of the project aims to develop immersive simulation learning environments to improve:
  - Affective engagement
  - Cognitive engagement
  - Behavioural engagement
- Creation of content specific to our education needs

Methodology Behind Design & Development

1 Herrington J, McKenney S, Reeves T, Oliver R. Design-based research and doctoral students: Guidelines for preparing a dissertation proposal. 2007.

Pilot Project

- The Brain® software to expose students to the pharmacological management of non-steroidal anti-inflammatory agents
  - » Portal to connect available content
- Students interacted with developed scenarios in a workshop setting
- Students reported on their self-perceived level of engagement, preference, and understanding of the topic
- Overall students reported a high preference towards the interactive activity and described improvement in their depth of understanding of the topic.

Pilot Project

Negative: Reliant of existing content!

A tiny device with huge possibilities.

The Leap Motion Controller tracks both hands and all 10 fingers with pinpoint precision and incredible speed. That wide-open space between you and your computer is now yours—to play, create and explore. Reach into another world without actually touching anything.
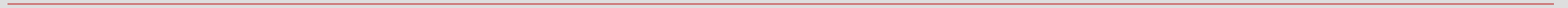
BUY NOW ▸

Scripting of Scenes

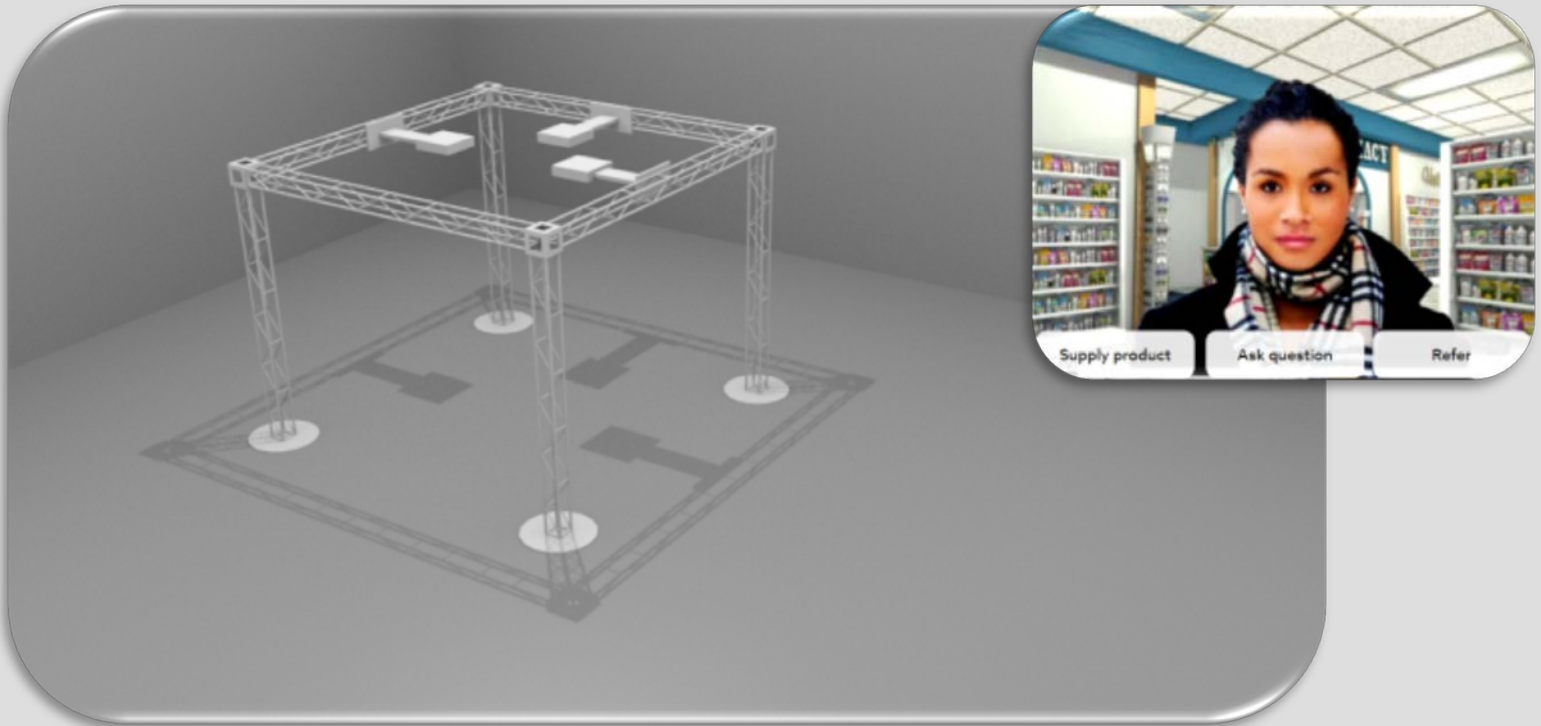# Creation of Scenes

Combine and real-time access to educator

The Delivery Environment

- Virtual "cave" fitted with gesture control

Blended learning environment for spiral learning

Research Team

- Dr Gary Grant (School of Pharmacy)
- Dr Shailendra Dukie (School of Pharmacy)
- Dr Sohil Khan (School of Pharmacy)
- Dr Christopher Klopper (School of Education and Professional Studies)
- Dr Jolon Faichney (School of Information and Communication Technology)
- Dr Abdullah Karaksha (PhD completion)
- Prof Andrew Davey (School of Pharmacy)

Research Students

- Lyndsee Baumann-Birkbeck (PhD candidate)
- Denise Hope (MMedRes student)