Mindset XR: Leeds, 25th June 2024.

Dr Tony Payton:
Senior Lecturer Healthcare Sciences, UoM
Director and Founder SentiraXR
JiscXR Steering Group/Chair of UoM VR@Manchester

Benefits of VR in Healthcare

STAFF

- Remove need for repeated training (time and cost saving)
- Improved insight into student performance (assessment and analytics)

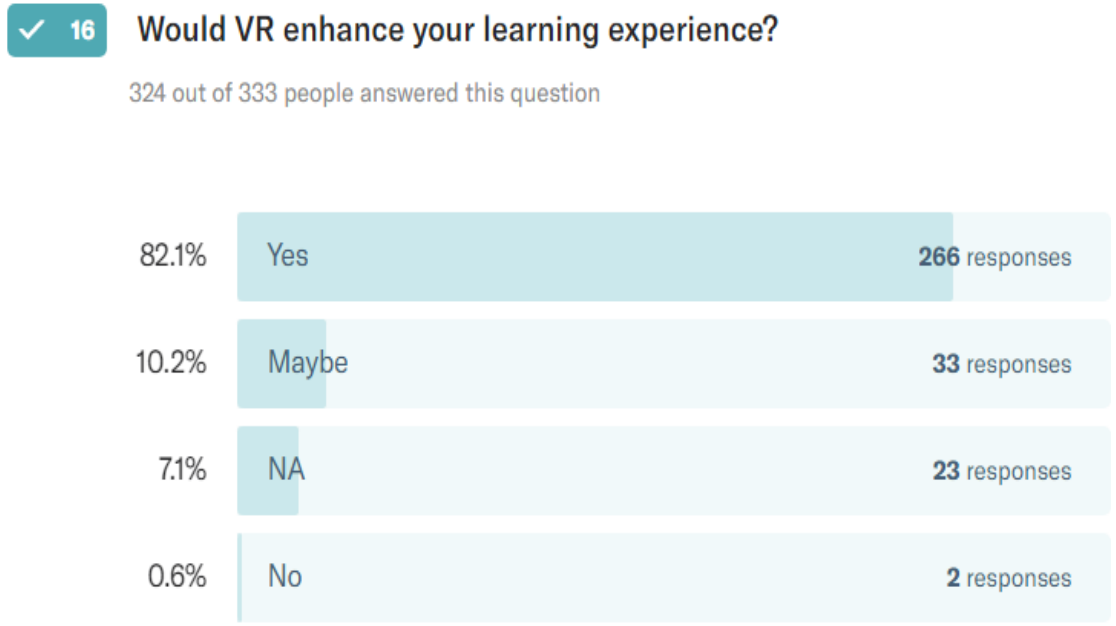
STUDENTS

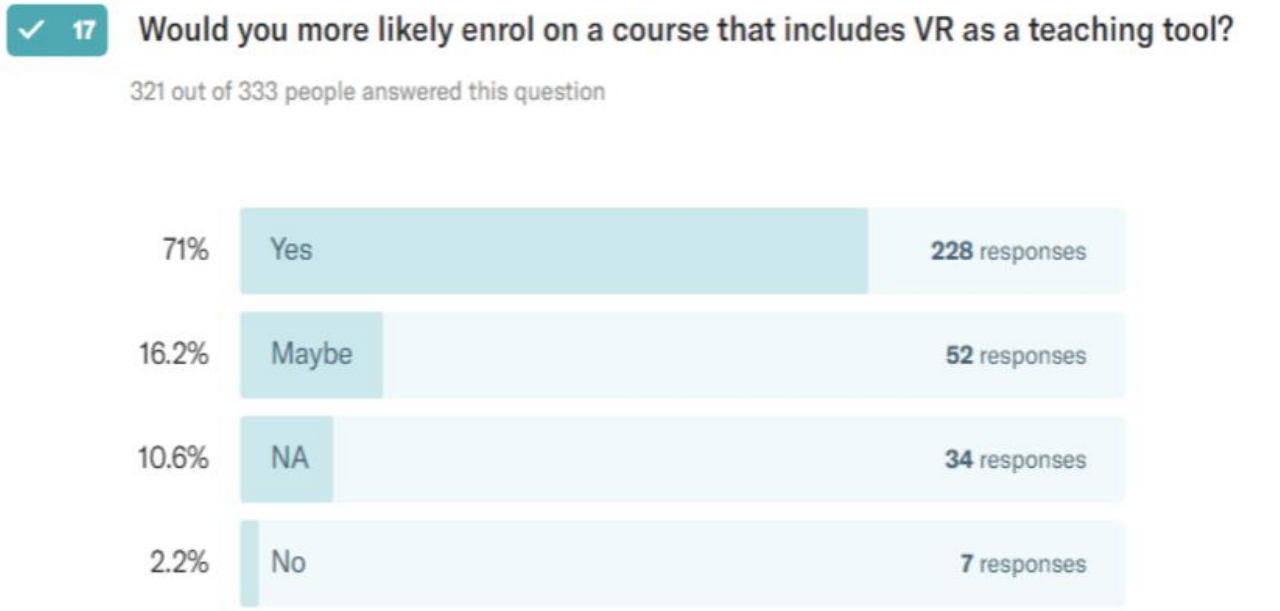
- Ability to practice in own time
- Immediate performance related feedback
- Build competence and confidence

HEALTHCARE INDUSTRY

- Better trained professionals
- Reduce potential for errors
- Improved patient safety

OUR JOURNEY 2019-present





Innovate UK/KIAT. AI to improve safe medication delivery to patients - a cloud-based virtual reality initiative to unblock pharmacology training. 85%; £960,000
Schizophrenia, **Trauma, Asthma**

2x Health Education England. NLP for medical history taking.
(Sentira^{XR} SME partner/UoM). >£100,000
Alzheimer's Disease, **Diabetes, Crohn's disease, Lung cancer, SALT**

Investor funding (tracheostomy sim)
£250,000

Wellbeing Simulation (NDA)
Private company/investors

THE TEAM

Jeremy Carter
CEO
>20 years commercial EdTech experience

Dr Antony Payton
Founder and Director
Senior Lecturer Healthcare Sciences, UoM

Dr Martin Fergie
Founder and CTO
Lecturer and researcher in AI, UoM

Emily Johnstone
Lead VR Developer

Victoria Zabolotna
Project Manager

Graham Robinson
3D Artist & Designer

Alexandra Warwick
NLP QA

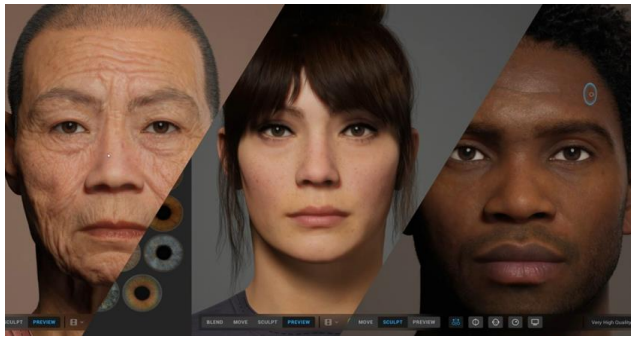
VR Mindfulness Programme: Alcoholism

Dr Stephen Kaar (Consultant Addition Psychiatrist)
Chapman-Barker NHS Unit in Manchester
Prof Rebecca Elliott (Chair in Affective Neuroscience)
The University of Manchester

4-week (2 sessions per week) mindfulness intervention

PITFALL 1: FAST MOVING TECH

2019 2020 2022 2023 2024



NLP, voice cloning, procedures

Sentira XR

Onboarding, Tutorial, Assessment, Feedback

SALBUTAMOL AND BECLOMETHASONE QUIZ

Question 3

When Salbutamol binds to its target receptors, what is the primary effect?

A
Contraction of bronchial smooth muscle

B
Decreased heart rate

C
Bronchodilation and relaxation of smooth muscle

D
Increased histamine release

Exit

Sentira XR

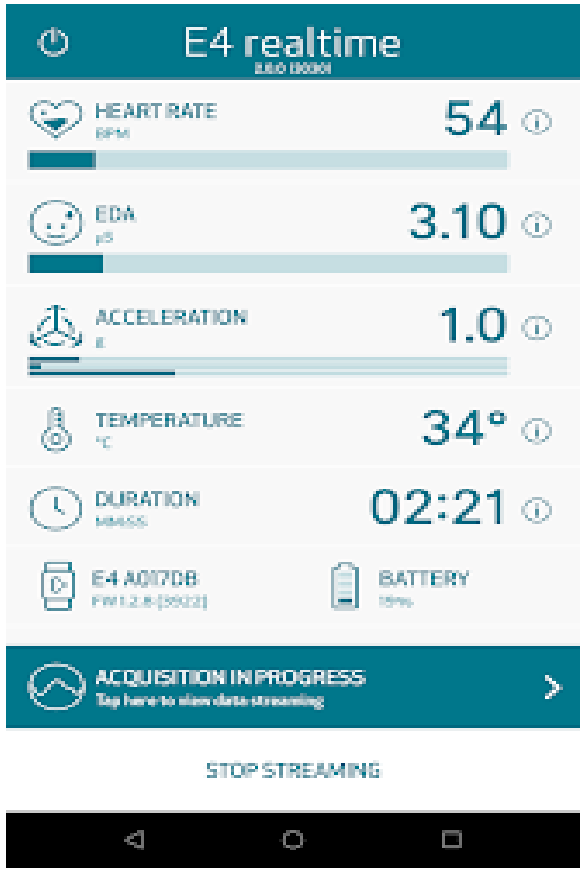
urrent Score:
276
All tasks have been completed!
16
Excellent
Good
Pass
Unsuccessful
Main Menu
Exit
16
14
12
10
8
6
4
2
0
X
Attempt 0
Steps
1. Pick Up Algorithim Card
2. Check Area For Safety
3. Shout For Help
4. Tilt Head back
5. Place Oxygen Face Mask
6. Place Oxygen Neck Mask
7. Remove The Humidifier
8. 1st Suction
9. Remove The Tracheostomy From The Infants Neck
10. Emergency Tube Change (Same Size Tube)
11. 2nd Suction
12. Emergency Tube Change (3.5mm)
13. 3rd Suction
14. Listen For Breathing
14. Call For Help
16. 5 Rescue Breaths
Completion Time: 164.32 seconds
Attempt 0
Attempt 1
Attempt 2
Attempt 3
Attempt 4
Attempt 5
Attempt 6
Completed Steps
Incomplete Steps
SentiraXR

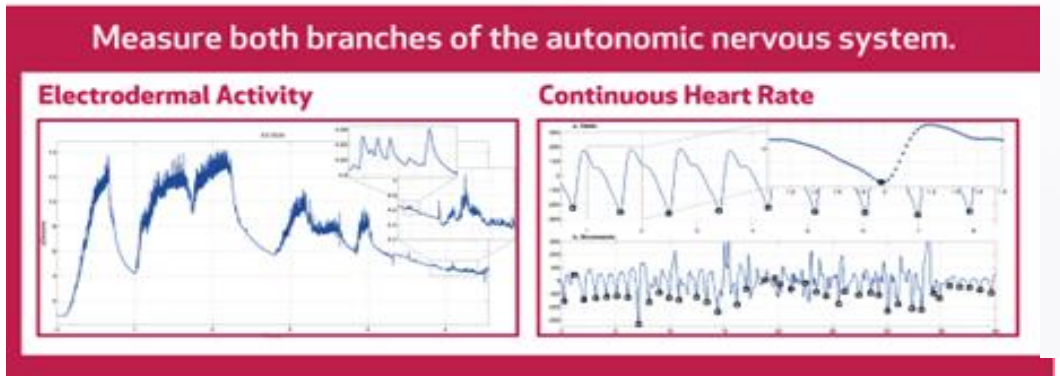
Multiuser

QUIT
SCANS
USERS
BEGIN
EMAIL
CLEAR BOARD
None
WALLACE^SHELLY
CMB-GEC-MSB-06857
Jane Oliver - (Coronal)

Alzheimer's Disease Patient

Wellbeing Simulation



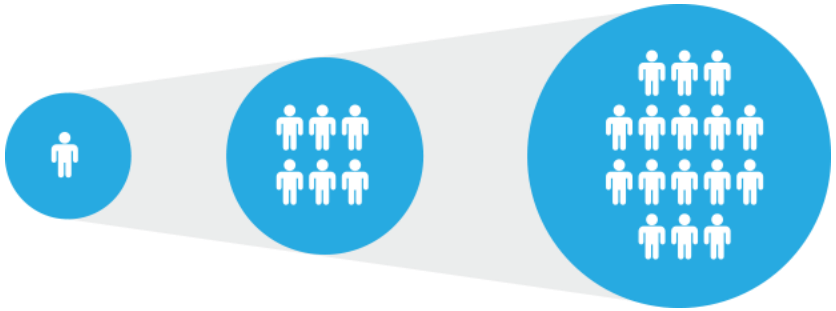


Designing a Virtual Reality Experience

Accessible:
for patients
(e.g., disabilities, languages)
ChatGPT 4 supports >80 languages

Usable:
Easy to use/learn

Scalable:
Individuals or large hospitals

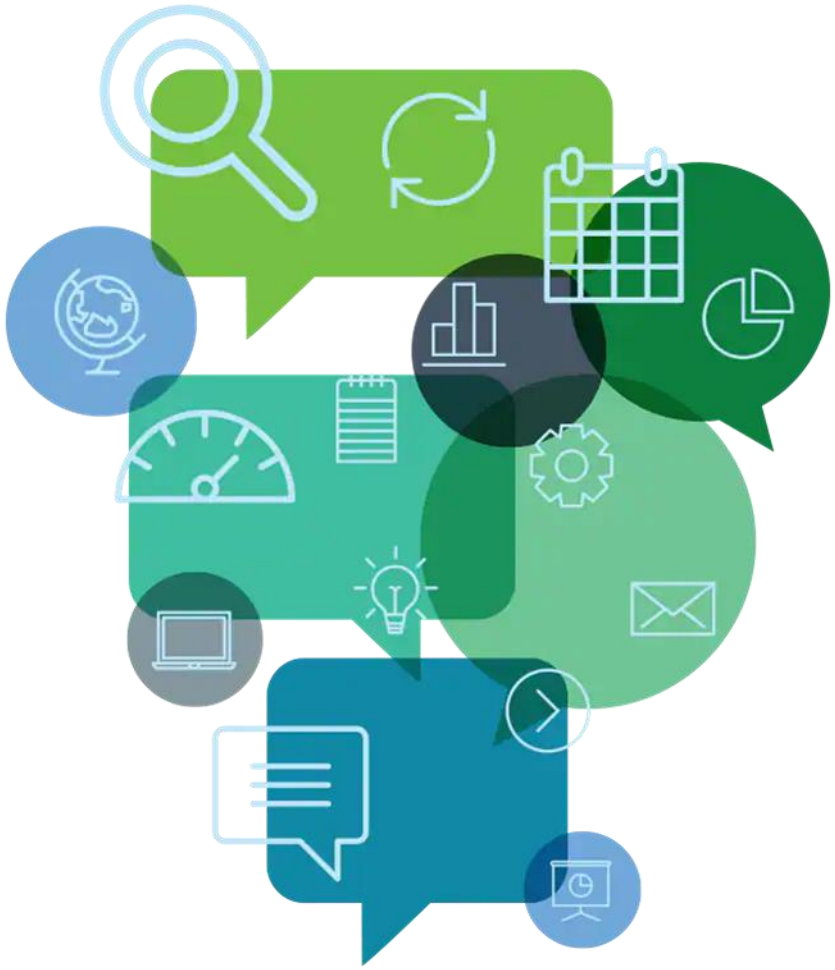


PITFALL 2: Adequate Support

- Storage/Distribution
- Setup time (1hr/headset)
- MDM Platform
- Maintenance costs
- Space
- Staff training
- Evaluation

ArborXR

ManageXR



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