Centre for Primary Care Education
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Virtual Reality (VR) – Can it help improve communication skills?

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Context

Virtual Reality (VR) is an immersive computing modality, enjoying a recent renaissance following earlier promising but ultimately limited results in industry in the early 1990's. VR is forecast to generate global revenues of > US$40 Billion/year by 2020 with a variety of markets addressed, including education[1].

VR has been used successfully to train medical professionals with the majority to date teaching procedural skills, such as surgical techniques[2]. VR is increasingly used for non-procedural skills training; a recent example includes helping patients with HIV practice disclosing their status to loved ones in a safe environment[3].

We are now educating a new generation of trainee (Generation Y – *'Millennial's'* and Generation Z – *'Digital Native's'*)[4]. It is important we engage with their learning needs in innovative and relevant ways.

Method

General Practice (GP) trainees (n=30) took part in a session to develop their communication skills using a novel approach incorporating the use of a Head Mounted Display (HMD). The HMD was used to help develop clear communication skills avoiding jargon and allowed the trainee to practice data gathering in a situation where they could not see the patient (mirroring online/telephone consultations).

A non-clinical scenario was used, 'Keep Talking and Nobody Explodes' - a 'bomb disposal' puzzle game. Groups of four trainees worked together; one trainee wearing the HMD described what they saw to two trainees, who could not see the 'bomb' but had a manual containing instructions on how to 'defuse' it, all whilst under time pressure. The fourth trainee observed and fed back the interactions between the trainee wearing the headset and those with the manual. Trainees completed a pre and post session questionnaire.

Results

100% of trainees found the communication skills session helpful, reporting the novel approach using HMD facilitated the teaching of communication skills and had advantages over traditional consultation skills/teaching sessions. None had ever used a VR headset before, but all were keen to use it again. Trainee self reported confidence increased in using clear communication skills avoiding jargon, data gathering in a situation working under pressure and managing uncertainty**.**

50% of trainees perceived that remote consultations were more difficult than they had originally thought, suggesting a previous unconscious incompetence inherent to their stage of training. One trainee found the use of a 'bomb' to be distressing, which was unexpected.

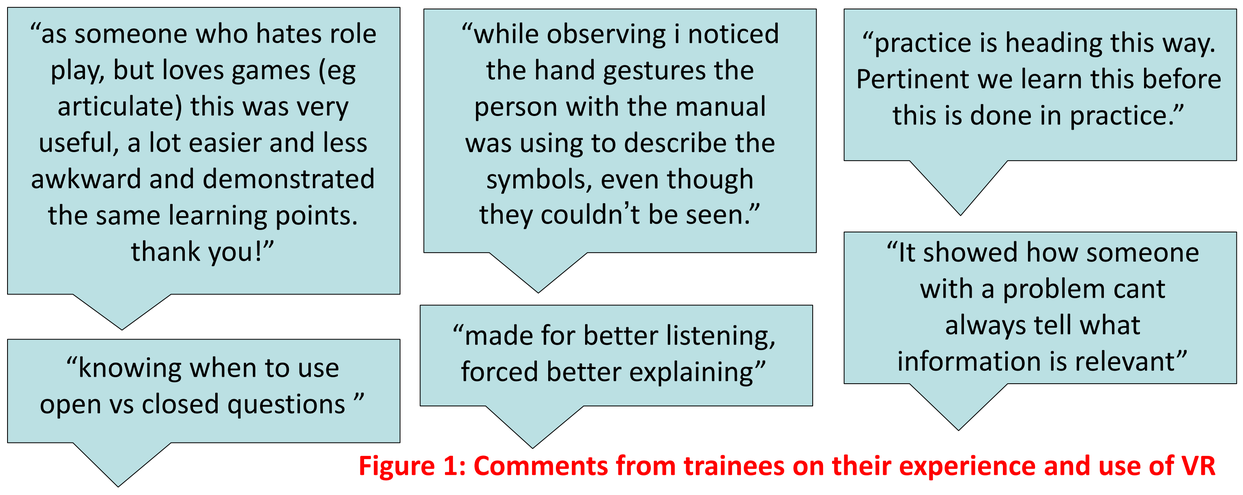

Figure 1: Comments from trainees on their experience and use of VR

Conclusion & Take home messages

VR is an evolving technology that has a place in medical education to teach communication skills.

This novel approach to teaching communication skills using a HMD has appeal to the *'digital native's'* new generation of trainee. Advantages of VR over learning through simple role play included improved trainee comfort, engagement and enthusiasm (as highlighted in figure one). However, the immersive nature of the technology must be considered to avoid any distress to trainees.

We must embrace the future of digital training and health care; the best care can only be provided to all if we can fully exploit the potential of digital and other technologies5, thus we will be exploring software packages and researching this technology and its applications to medical education further.

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