Step into your future: Role of VR simulation in enabling exploration of opportunities in health and social care for young adults in remote and rural areas

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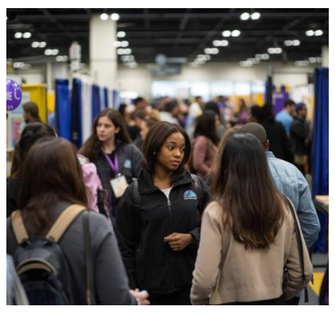
Background

Young people often lack awareness of the career options open to them with more than half reporting uncertainty about post-school pathways[1]. Health and Social Care is a huge sector, with around 350 different roles and many pathways into these roles. Despite this, NHS Highland is facing a growing shortage of young people entering careers, especially in our remote and rural areas.



Traditional career talks and fairs provide limited, one-off exposure and rarely help pupils connect their strengths and interests to real NHS roles. Inspiring young people to pursue a career within health and social care through a 'job taster' approach nurtures awareness and an individual's ability to appreciate how their skills and knowledge apply to the world of work[2]

Issue

We designed, developed and implemented an engagement programme that allows young people to put their knowledge, competency and skills into practice, inspiring them to consider a range of career options. (Fig 1). However, in delivering the programme we met with several challenges:

- **Distance and travel limitations** restricting attendance at in-person sessions.
- **Limited exposure to real clinical environments**, making it difficult to understand day-to-day tasks.

These challenges create unequal access to career education and hinder informed decision-making.

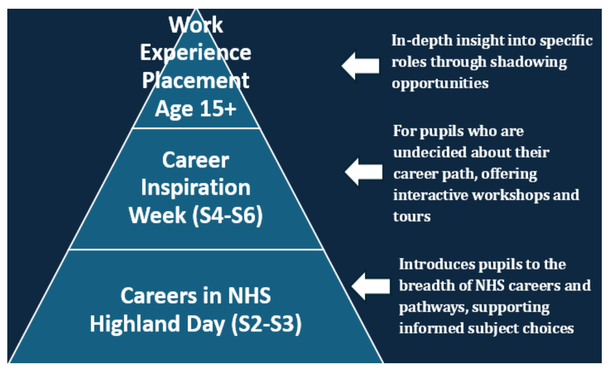


Fig 1. 3-Tiered Secondary School engagement programme

Proposal

Recent research in STEM education [3,4,5] has shown that Virtual Reality (VR) simulations boost interest and perceived value of the learning in young people and are typically more engaging than using videos in providing learning about a situation or environment. The impact is improved when combined with generative learning strategies where individuals actively apply their knowledge. VR enables a 'life-like' experience which not only enables individuals to learn about jobs, but more importantly understand what it would be like to be in that role.

Research Questions

Is VR simulation effective in promoting and inspiring young people to consider a career in the NHS?

- Are VR simulation workshops perceived by young people as accessible and as acceptable as 'real-life experience workshops, as part of a Career Inspiration Programme ?
- Do VR simulation workshops provide as positive an impact as a real-life experience workshops, on young peoples' awareness of careers in NHSH as part of the Career Inspiration Programme?

Pilot Study

Endowment funding secured via NHS Highland's Research, Development & Innovation (RD&I) 'Dragon's Den' programme enabled the evaluation of Virtual Reality (VR) simulations. The pilot was in collaboration with Care Reality[6], a UK-based company focused on transforming education and training in health and social care through immersive virtual reality experiences.

We trialled Care Reality created **VR workshops** alongside **'real-life' workshops** with pupils (S4-S6) attending our **Career Inspiration Weeks**. These weeks are designed to spark curiosity, explore diverse roles, reflect on personal strengths, and support young people to make informed career choices (Fig 2)

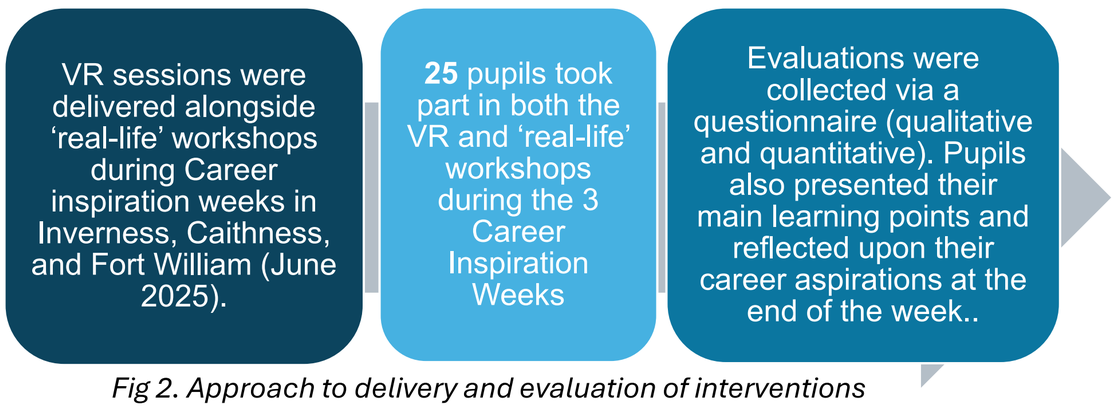


Fig 2. Approach to delivery and evaluation of interventions

Pupils learnt about different roles and were able to apply their skills in various scenarios by taking part in VR and 'real-life' activities (Fig. 3).

Fig 3. Photos of pupils taking part in workshops

Workshops covered a range of different job roles from domestic assistant to operating department practitioner.

https://www.carereality.io/learning-library

Findings

A Likert Scale evaluation allowed young people to score their experiences against a range of questions. In addition, free text comments were collected to provide a more nuanced exploration of their experiences.

Although most pupils had limited or no experience of using VR (**21/25**), they found the activities and instructions easy to follow and intuitive. As a result, most reported enjoying or really enjoying the use of VR in the workshops. (Fig. 4)

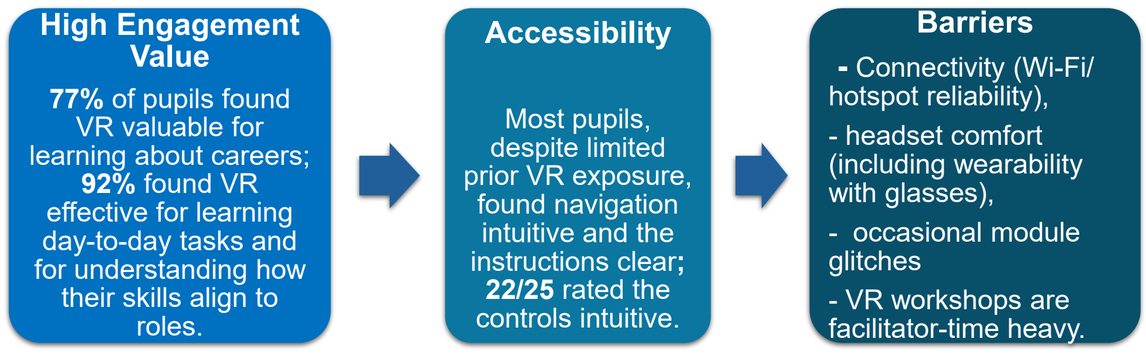


Fig 4. Main themes from analysis of qualitative feedback

An analysis of qualitative data gathered using coding and theming of the responses highlighted that the pupils enjoyed **becoming the practitioner**, entering a **clinical environment** and **undertaking procedures** which would be a challenge in person. This suggests that being able to do the tasks in a safe space, user led and *stepping into the practitioner shoes* was the perceived benefit of VR workshops.

> ***…it helped me really love the reality as a medical practitioner having to use VR to deal with different scenarios* (Pupil A)**

> ***..was good to have a go at some activities you couldn't do in person (Pupils B)***

> ***….I found it highly immersive and gave me a chance to practice and learn clinical skills without the pressure of real people (Pupil C)***

We asked pupils to compare their experience of 'real-life' workshops with VR workshops. (Fig 5)

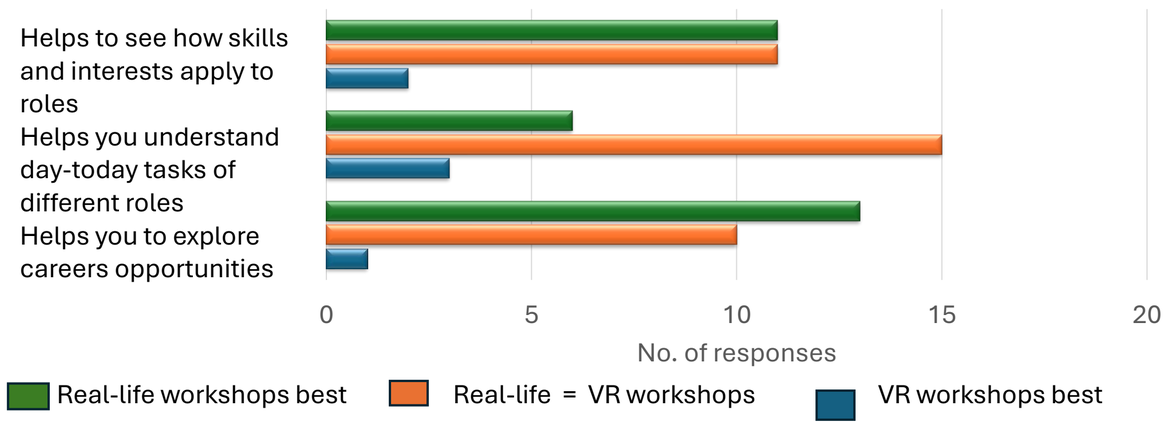


Fig. 5 How do you think VR compares to the other workshops (real-life) in addressing each of the following

There was a 50/50 split between pupils who thought VR and Real life were comparable for learning how their skills applied to different roles. VR is seen as comparable with real-life experiences for most pupils (60%) for learning about the day-to-day tasks. Real-life workshops were seen as more appropriate to learn about potential career opportunities (52%)

Discussion

Feedback from pupils indicates that VR:

- Is an effective and engaging learning tool,
- Offers an experience comparable to traditional 'real-life' workshops.
- Allows learners to access scenarios that cannot be replicated in real settings, such as performing clinical procedures on patients.
- Addresses Gatsby Benchmarks (4 & 6)[7] which encourage innovative approaches that move away from the traditional work experience placement.

VR workshops helped pupils to understand how their skills and knowledge apply across different situations. Entering the virtual world was described as enjoyable, and the immersive activities not only enhanced understanding of day-to-day healthcare tasks but also sparked greater interest in pursuing careers in health and care.

Next steps

This service evaluation explored how virtual reality (VR) can raise pupils' awareness of NHS careers by introducing them to basic tasks and required skills. The initial workshops have been positively evaluated by pupils.

- The next phase will involve trialling the VR workshops in remote areas where pupils lack access to in-person sessions.
- This will help determine whether stand-alone VR provides an equally effective and engaging career-inspiration experience, compared to practitioner led activities, for young people in remote areas.

References

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