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Introducing Virtual Reality Simulation in Skills-Based Occupational Therapy Education: A Pretest-Posttest Study on Students' Perceptions of their Practice Competencies



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Outline of this presentation

❖ Background

❖ Methods

❖ Findings

❖ Conclusions & implications



Background

- **Drivers for change**

- Preparing students for the transition into Year 1 placement
- Limited practice placement availability
- Limited OT-specific virtual simulation platforms
- Lessons from the COVID-19 pandemic

- **Enablers**

- RCOT guidance recognising simulation towards placement hours
- Health Education England funding to support simulation-based education
- Availability of Oxford Medical Simulation platform

Methods

- Service improvement approach to **explore** to ways of embedding VR simulation
- Single-group **pretest–posttest** survey design
- **Year 1** occupational therapy cohort
- Pre-test **n=33** | Post-test **n=19**
- Likert-scale type questionnaire (Based on LOs & placement competencies)
- SPSS v.29 | Wilcoxon signed-rank test ($p < 0.05$)

Project delivery

- Individual OMS accounts for remote access
- Tutorial walkthrough provided
- Face-to-face briefing for Scenario introduction followed by self-managed learning one scenario at a time (SML) (5 scenarios)
- Students completed the scenarios remotely
- Face-to-face debrief with tutors & OMS analytics
- Briefing/debrief slides uploaded to VLE



Analytics used during delivery

What went well - critical aspects

What went well... 00:00

In this section we will explain why a particular action was correct, but if you need more information, you can click on 'rationale' to find out more. Click on the rationale section below to find out more information about how the feedback works.

[Show rationale](#)

Critical Technical Non-technical Communication Teamwork

What to improve on - critical aspects

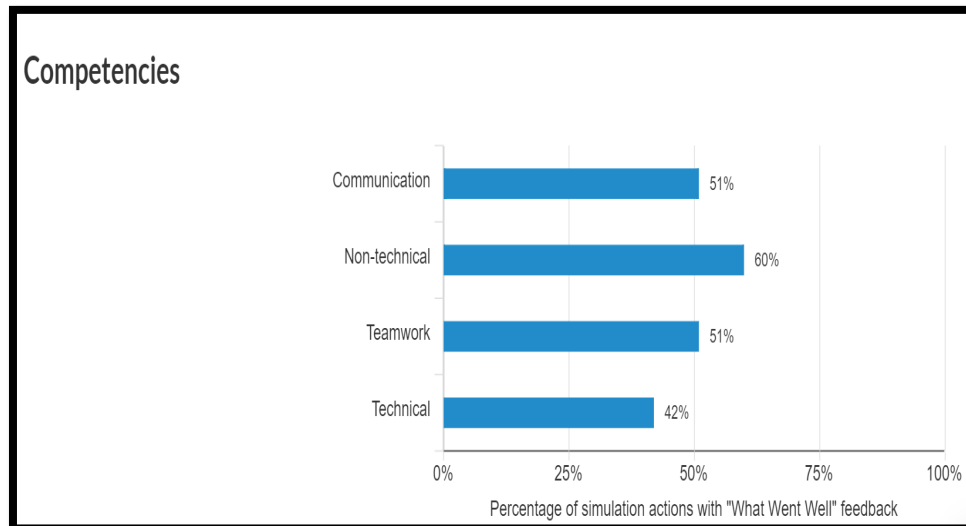
What you could improve next time... 00:00

In this section we will explain why a particular action was incorrect, but if you need more information, you can click on 'rationale' to find out more. Click on the rationale section below to find out more information about how the feedback works.

[Show rationale](#)

Critical Technical Non-technical Communication Teamwork

Source: [OMS](#)



Your average score

80%

Cohort average: 75%

Progress

Latest

Engagement

12 sessions run

10 scenarios attempted

14 scenarios available

Improvement

Attempt	Improvement
1st attempt	74%
2nd attempt	86%

Source: [OMS](#)

Findings

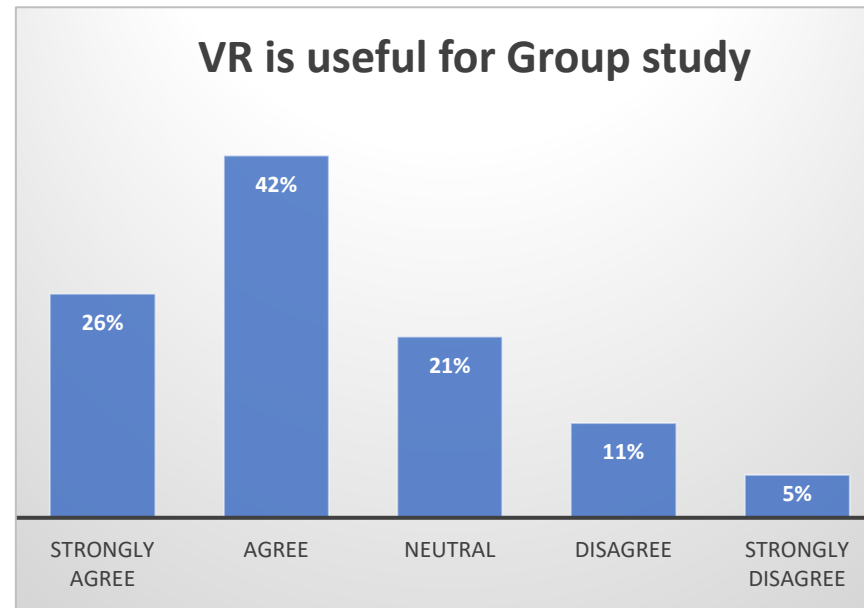
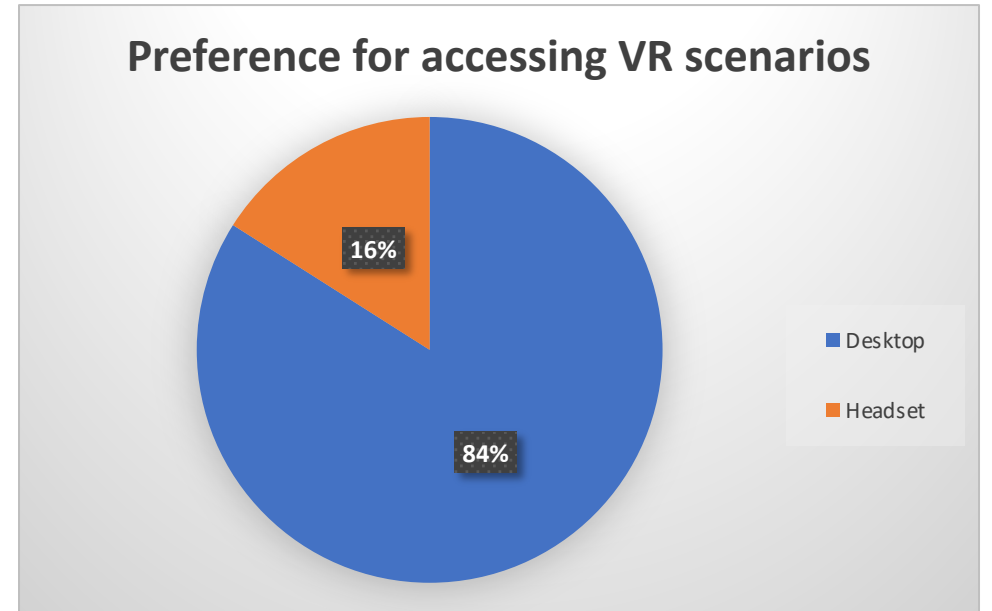
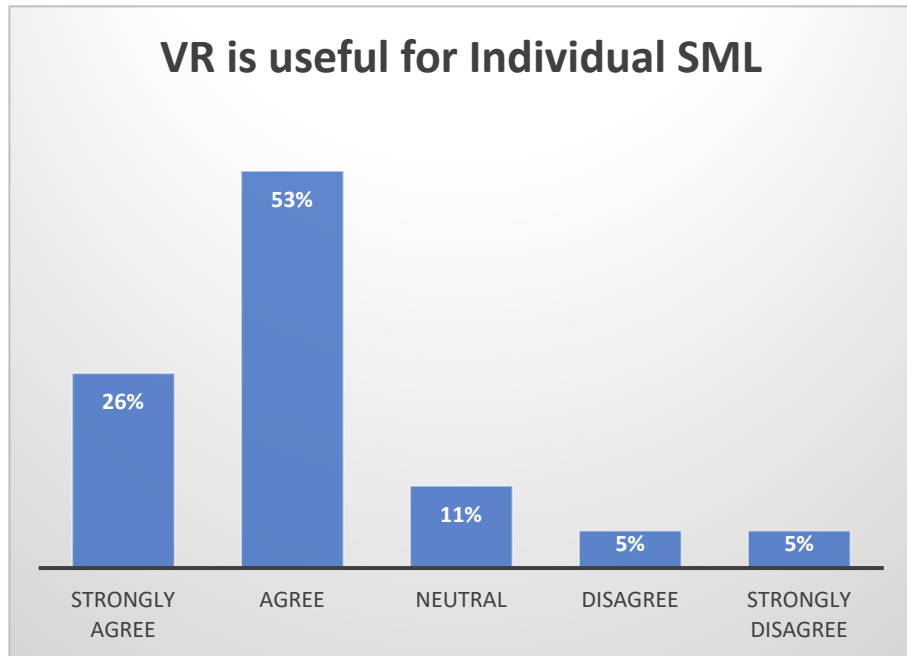
Comparison of pre-test (n=33) and post-test (n=19) study characteristics [p<0.05]

Study variables	Z scores and p values [2-tailed]
Confidence in communicating with service users	-0.656 (p=0.512)
Confidence in communicating with MDT	-0.492 (p=0.623)
Confidence in Assessment	-2.095 (p=0.036)
Confidence in Treatment planning	-3.095 (p=0.002)
Confidence in providing treatment	-2.804 (p=0.005)

- There was statistically significant improvement in confidence in:
 - **Assessments,**
 - **Planning interventions**
 - **Delivering interventions**
- There was no statistically significant improvement in confidence in:
 - **Communicating with MDT members**
 - **Communicating with service users**

Findings

Descriptive statistics (n=19)



Conclusion

- VR simulation has promising potential for use in teaching and learning occupational therapy practice skills and competencies.
- There is need to explore options for using VR scenarios customised for occupational therapy
- The project provided transferable learning which could be useful in implementing similar projects.

Key References

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THANK YOU!

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