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Title: Using XR Technology to Innovate Healthcare Education

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INTRODUCTION

- Several methods to increase the engagement of healthcare students and decrease their barriers to higher education (HE) and learning have been explored (Stretton et al., 2018).
- A student-centered pedagogy that incorporates the use of technology can be useful in facilitating HE and learning (Stretton et al., 2018).
- Simulation-based experiences can assist in this effort.
- The use of virtual, augmented, and mixed reality (XR) paradigms and the associated technologies in healthcare education has intensified in recent years (McCarthy & Uppot, 2019).
- The advantages of XR are plentiful (Gerup et al., 2020; McCarthy & Uppot, 2019); however, limitations do exist (McCarthy & Uppot, 2019).
- To maximize the benefits of XR, simulationists should understand the associated terms along with its advantages and challenges.
- To consider incorporating it into curricula, simulationists should appreciate different examples of each type.

TERMS – HEALTHCARE EDUCATION

- *Virtual Reality (VR)* – Immersive 3-D environment (Lioce et al., 2020).
- *Augmented Reality (AR)* – Combines real and virtual data (Lioce et al., 2020).
- *Mixed Reality (XR)* – Hybrid; enhanced AR (Lioce et al., 2020).



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EXAMPLES OF XR USES

(Benefits [+]/Challenges [-])

- Examples (See Center).
- **[+]** No actual patients needed.
- **[+]** Immersive.
- **[+]** Cost.
- **[+]** Readily accessible.
- **[-]** Technology glitches.
- **[-]** Cleaning.
- **[-]** More research needed.
- **[-]** Cost.

(Anderson et al., 2021).

MEASURES TO INCREASE

USE/INCORPORATE

- Grant funding for equipment, scenarios, and research.
- Start with pilot study.
- Need way to clean associated devices.
- Faculty development opportunities.
- Walk faculty through process/scenarios.
- Trial in multiple student levels.

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REFERENCES

- See QRS code for References.



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