Changing Your Reality

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Education

PROBLEM / OPPORTUNITY

COVID-19 has made us re-evaluate how we engage learners, both face-to-face and remotely. Commercial Virtual Reality (VR) solutions helped to quickly fill the void with the onset of COVID-19; however, they are costly, with limited or no ability to customize the VR experience to suit the educator's specific objectives . We have the ability and opportunity to create and provide customized, high quality VR solutions for our learners at a fraction of the cost of commercial options.

IDEA SUMMARY

Develop templated multi-learner VR solutions that are compatible with multiple platforms and devices and are customizable to the educator's needs. Align VR interactions to specific educator objectives, providing educators with individual and team metrics.

VALUE PROPOSITION / BENEFITS

VR offers increased learner engagement by increasing sensory immersion and creating a realistic training environment. Templated VR increases the efficiency at which VR can be produced. Internally produced VR offers cost savings coupled with customization. Customization allows participant achievement and metrics to meet the educator's specific needs.

IMPLEMENTATION PLAN

Current implementation: participants are present at the MUSC Healthcare Simulation Center (HSC) where the HSC will provide all necessary hardware and software to facilitate the multi-participant VR experience. Responsibilities and policies are similar to those involved with simulator-based activities.

Future implementation: Creation and deployment of dedicated server(s). Remote deployment of VR software to participants' hardware.

RESULTS
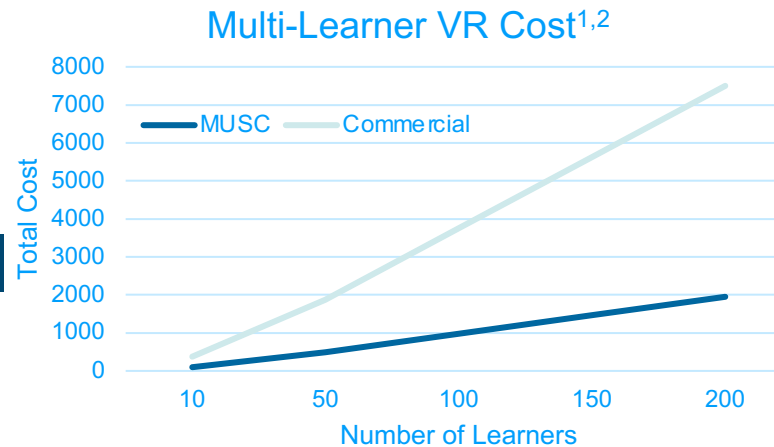
Figure 1. Cost comparison per participant of Multi-Learner VR between MUSC internally produced VR and MUSC commercially purchased VR.

BUDGET / FINANCIALS

1-2 Years: Maintenance and repair ($500); Dedicated server(s) ($120); Licensing fees ($250); software update(s) ($0); 3D asset ($250)

4-5 Years: R&D hardware ($7500 for Windows setup; $1500 for MAC setup); learner hardware ($2500 per learner x 4-5 sets) [can be as low as $500 per learner]

LESSONS LEARNED

It is necessary to maintain current hardware and software to develop, test, and deploy VR. Without such maintenance, development slows, and testing becomes unreliable or impossible. This requires a frequent replacement of hardware to meet the demands of changing advances and technologies.

REFERENCES

1. Lee, F. (March 02, 2021). *Proposed VR Pricing*. Personal communication.

2. Costiuc, N. (November 12, 2020). *Notes on Our Call Today*. Personal communication.