

## Implications of Virtual Reality Adoption for Texas A&M AgriLife Extension Programs

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Virtual reality (VR) is the forefront of future agricultural sciences dissemination. VR will be a beneficial asset to improving global food security and better understanding climate impacts. Texas A&M AgriLife Extension connects research to industry and stakeholders across Texas. One thing that we can garner from this pandemic experience is that having VR tools to relay information in times where you may not have access is vital to education for both youth and adult students. VR allows people from all backgrounds to have immersive experiences at their leisure. The impact of VR learning in the agricultural sciences is relatively unknown in the literature. Therefore, I examined research publications implementing VR learning published in the premier journal for VR scholarship *Virtual Reality*. We included only literature published from 2014-2020 to narrow the scope of the study. I examined 24 publications from volumes 16 through 24 and included articles that met the following parameters: (a) adoption; (b) engagement; (c) learning; and (d) barriers. Each publication that met the parameters of this study was investigated and content for each study was organized in a matrix. The literature synthesis indicated adoption was dependent on VR accessibility. Participants reported engagement was influenced by active learning curricula. The literature indicated increased learning was dependent on the visual quality of materials. Cybersickness was the primary barrier to participants meeting learning outcomes through VR dissemination. Extension program developers should take into account the role of accessibility, engagement, learning, and cybersickness prior to developing VR curricula for target audiences.

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