

## Exploring the Need to Study the Efficacy of VR Training Compared to Traditional Cybersecurity Training

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**Abstract :** Effective cybersecurity training is of the utmost importance, given the plethora of attacks that continue to increase in complexity and ubiquity. VR cybersecurity training remains a starkly understudied discipline. Studies that evaluated the effectiveness of VR cybersecurity training over traditional methods are required. An engaging and interactive platform can support knowledge retention of the training material. Consequently, an effective form of cybersecurity training is required to support a culture of cybersecurity awareness. Measurements of effectiveness varied throughout the studies, with surveys and observations being the two most utilized forms of evaluating effectiveness. Further research is needed to evaluate the effectiveness of VR cybersecurity training and traditional training. Additionally, research for evaluating if VR cybersecurity training is more effective than traditional methods is vital. This paper proposes a methodology to compare the two cybersecurity training methods and their effectiveness. The proposed framework includes developing both VR and traditional cybersecurity training methods and delivering them to at least 100 users. A quiz along with a survey will be administered and statistically analyzed to determine if there is a difference in knowledge retention and user satisfaction. The aim of this paper is to bring attention to the need to study VR cybersecurity training and its effectiveness compared to traditional training methods. This paper hopes to contribute to the cybersecurity training field by providing an effective way to train users for security awareness. If VR training is deemed more effective, this could create a new direction for cybersecurity training practices.

**Keywords :** virtual reality cybersecurity training, VR cybersecurity training, traditional cybersecurity training

**Conference Title :** ICCSS 2021 : International Conference on Cybersecurity and Security Systems

**Conference Location :** Paris, France

**Conference Dates :** January 25-26, 2021