

Embodied virtual reality helps reduce public speaking anxiety and increases persuasiveness and charisma of high-school students

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Abstract

The use of virtual reality (VR) environments to reduce anxiety during public speaking has already been shown effective for managing distress arousal, especially in participants with social anxiety disorders. However, no previous studies have assessed the role of speaker embodiment during VR training, that is, the role of the speakers' full use of the body and voice to express themselves on the improvement of their oral presentations after training. The present study has the goal of assessing the value added to such training by encouraging speakers to “embody” their public speaking performance. Forty-two secondary school students participated in a three-session between-subjects training experiment with a pre-test and post-test design. Each training session consisted of giving a short talk in front of a virtual audience. Pre-test and post-test consisted of preparing and giving a short talk in front of a small live audience. The student participants were divided into two groups. While one group was instructed to use the training sessions to practice public speaking before an audience, the other group was given the additional instruction to use their body to enhance their delivery while speaking. Anxiety levels just prior to speaking were self-reported by participants at pre-test and post-test. Students assessed their anxiety measures right before performing every speech, and filled out a satisfaction questionnaire at the end. All public speeches at pre- and post-test were assessed by 15 raters, who analyzed the persuasiveness of the message and the charisma of the presenter. First, results showed that self-assessed anxiety showed a significant reduction at post-test for both groups, with a significantly higher reduction in the Embodied VR group. Second, features of persuasiveness and charisma reached significantly higher rates in the Embodied-VR group. Thus, short embodied VR training sessions can help students feel less anxious before a real audience and can make them more charismatic and make their messages more persuasive.

Keywords: Virtual reality, embodiment, persuasion and charisma, public speaking