**Study of Assessment Methods for VR Meditation Applications**

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Abstract

Mindfulness meditation can have positive impacts such as promoting relaxation, deep focus, and reducing stress and anxiety. Our goal is to work on a VR meditation application where the player can find hidden objects in the environment and measure the player’s data to evaluate the effectiveness of our game and measure if the user’s attention improves.

VR applications have the potential for mindfulness meditation for novice users. Compared with traditional techniques, they provide immersive environment so that participants can have more realistic experience and focus better on their surroundings during VR meditation. Additionally, the goal of VR mindfulness skills is not to distract. To achieve this, the VR program provides objectives to redirect the users' attention to specific stimuli, such as visuals and finding a hidden object, while they are immersed in the virtual environment. This practice helps users develop active control over their attention and mindfully direct it to different aspects of the virtual experience.

In this project, we explored peer-reviewed articles that conducted studies on VR applications for meditation, and investigated similar software applications and their methods for product assessment. To measure the effectiveness of meditation, there are a variety of self-report questionnaires on a point-based scale that can demonstrate meditation being useful for people. One method used to measure attention in VR applications is the Mindfulness Attention Awareness Scale questionnaire. Mindfulness Attention Awareness Scale is a measurement used to evaluate self-regulated well-being and the level of discipline within a current experience or moment. For the questionnaire, we plan to have a background section, a sense of presence section, and an attention awareness section that includes the emotions the user feels (happiness, sadness, anger, surprise, anxiety, relaxation, and energy) before and after the VR meditation. Our work is expected to contribute to the construction of an integrated system for attention self-evaluation, meditation, guided training, and performance assessment.

Project category: Computer Science

Keywords: VR applications, Mindfulness Attention Awareness Scale

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