



Six Power Steps: Implementing a Neurolinguistic Programming Technique in a Virtual Reality Game to Reduce Anxiety among University Students

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Abstract. This session addresses the implementation of Six Power Steps, a VR game that was designed in 2020 to manage pandemic-induced anxiety that affects students' mental health. As the pandemic forced many Higher Education institutions globally to shut down and deliver classes via video conferencing tools, students encountered several challenges including anxiety which hampered the learning process. Funded by the COVID19 Emergency Research Program at Prince Sultan University in Saudi Arabia, Six-Power Steps merged affordances of virtual reality and Neuro-Linguistic Programming (NLP) intervention techniques to empower students and enhance their academic skills by reducing anxiety.

Keywords: Neurolinguistic Programming, Virtual reality, Anxiety, Intervention.

1 Introduction

6 Power Steps is a VR game that aims to reduce students' anxiety and improve their mental health. It was funded in 2020 by the COVID19 Emergency Research Program at Prince Sultan University, Saudi Arabia. The game uses a meditation technique in neuro-linguistic programming called six-step reframing in a VR game experience to help university students overcome anxiety. The game uses neuro-linguistic programming (NLP) as an intervention and VR as a medium due to school closures as a response to the pandemic. The choice of VR as a medium for implementing the six-step reframing was "because it is based on the two central ideas of representation systems and perceptual position" [1]. Slater claims that the user's subjective experience in the NLP model is represented by a visual system that consists of internal and external images; the auditory system that includes external sound like sound effects or guided meditations and internal sounds like internal speech, the kinesthetic system includes the tactile sensory experiences, haptic experiences that result from the impact of external factors acting upon the body, and emotional reactions (p. 92).

2 Impacting a Change from Negative to Positive Thoughts

There are several ways in which combining NLP and VR can reduce anxiety. The game helps the player identify the behavior that needs to be changed (in this case it is the behavior that is impacted by anxiety); stimulate the responsible part of that behavior through audio therapy; isolate that behavior and exchanging it for a new positive behavior; and finally adopt a new behavior with a new plan for a positive future.

3 Integrating NLP and VR

According to Jerald [2], when designing an immersive experience, "we can control what stimuli are presented to users and influence, not control, what that person experiences". With the help of NLP, students' mental states can

be altered, enabling them to freely transition from states that impede learning to those that speed the willingness to learn in meaningful ways [3]. Accordingly, NLP improves students' confidence, self-esteem, interpersonal and intrapersonal skills. It also helps students overcome anxiety. Moreover, there is an indirect association between VR and NLP in which “Embodiment in VR implicitly shifts users’ self-concept in a powerful way as “someone who can transcend his/her own limitations” (p. 36).

The six steps were divided into six game levels in which the player, through the guided meditation, tries to overcome obstacles in the game. The player finds himself/herself in a dark setting where they have to complete six challenges to reach an imaginary island. Each challenge is a unique encounter and symbolizes a specific fear.

Conclusion

Six Power Steps is a VR game that is used as an intervention to help university students overcome anxiety. It was funded by Prince Sultan University as a response to the pandemic where educational institutions had to shut down and use video conferencing tools to educate students. The game is a therapeutic intervention to address challenges students encounter and help them focus on their studies and personal lives.

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