

LabVR UNISI project sheet

by

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The problems posed by the health emergency have led universities and schools to start a process of change that has led to the experimentation of all innovative digital technologies to support research and teaching. In this perspective, which has actively involved all levels of our educational system, particular attention has been paid to the use of Virtual Reality (VR) which offers numerous opportunities for the innovation of university activities and in particular for psychological support interventions for university students. Its characteristics of immersion, interactivity and multisensoriality appear in fact capable of allowing a radical change not only in the remote use of psychological support interventions, but also of profoundly transforming in-person therapies, exploiting the availability of advanced digital content to allow students to receive help through shared experiences in virtual reality. In this perspective, the Virtual Reality Laboratory of the University of Siena intends to start a pilot project for the use of virtual reality for the psychological support of students of the University of Siena.

The project of the University of Siena aims to pragmatically use VR as a tool that acts as a mediator between the psychologist and university students without replacing the essential elements of any psychotherapeutic approach. Overcoming some of the limitations of cognitive-behavioral therapy (CBT), VR allows for experiences that are otherwise difficult to replicate by representing a context of social interaction through which it is possible to experience emotions and actions, to make users relive their fears and non-functional behaviors in order to immerse them in a relatively low-cost virtual environment by subjecting them to simulations available on the market. One of the current clinical uses of this technology is through VR exposure therapy (VRET), where the patient is gradually exposed to a negative stimulus in a controlled and safe environment to reduce anxiety. The main technique used in the intervention is Systematic Desensitization (SD) which involves gradually exposing the patient to anxiety-provoking stimuli. It is possible to provide students with simulations in which exam-like situations are replicated to accustom them to managing stress in a controlled environment and simulations in which anxieties related to programming and managing deadlines can be experienced.

Virtual reality can also be used generally to reduce anxiety and depression. The application consists in the student's navigation through a relaxing virtual environment. The distraction of virtual reality allows to reduce the levels of anxiety compared to the control group. In this way it is possible to induce a significant decrease in the levels of anxiety perceived by students.

To implement the project it is necessary to involve a pilot sample to whom a series of virtual environments are administered and their performance in terms of stress is compared to a control group that is subjected to an equally relaxing stimulus but in a real environment. The comparison must be validated through indices such as the State-Trait Anxiety Inventory (STAI) and the Perceived Stress Scale (PSS) to measure the perceived level of anxiety before and after the VR experience.