

Press Release

Vienna, 13.01.2023

VR TRAINING FOR RESILIENCE ENHANCEMENT ACCORDING TO VIKTOR FRANKL

VR training has great potential to strengthen people's resilience (psychological resistance) - as the recently completed project "ReSoLVE" at the Austrian Institute of Technology (AIT) has shown.

Vienna (AIT): Are logotherapy and existential analysis (LTEA) by the renowned Austrian neurologist and psychiatrist Viktor Frankl a useful basis for strengthening people's resilience by means of virtual reality training? This approach was investigated in the research project "ReSoLVE" at the AIT Center of Technology Experience.

Resilience enhancement is the order of the day in times of crisis. How can people cope better with crises and difficult situations in the future? Is it possible to improve people's resilience (psychological resistance) through the use of virtual reality (VR)? These questions should be answered in the research project ReSoLVE (Resilience Strengthening in Virtual Environments through Meaning-Finding).

Viktor Frankl's approach as basis

Logotherapy and Existential Analysis (LTEA) was founded by the Viennese psychiatrist and neurologist Viktor Frankl (1905-1997). Today, LTEA is an internationally recognised psychotherapy approach. It is about supporting patients in a goal-oriented and methodical way in their search for "meaning in life". Despite the empirical evidence for the effectiveness of LTEA as well as its proven potential to strengthen resilience, Frankl's approach has never been applied supported by new ICT technologies. "The idea of linking Frankl's approach with VR training has actually catapulted us into the future of psychotherapy here," AIT project manager Ulrike Kretzer is convinced. The use of virtual reality offers many advantages and was investigated for the first time in the ReSoLVE project in connection with LTEA and resilience. "VR enables both realistic experiences in a safe and controllable environment and the repetition of these experiences, which can be carried out as often as desired, to learn new options for action. This is why VR is already increasingly used in areas such as training, coaching and therapy," explains Kretzer.

Method: Benefiting from personal experience

In the ReSoLVE project, which was funded in the FFG ICT of the Future programme ICT of the Future, the AIT Center for Technology Experience worked together with the agency digital media support. "Viktor Frankl would have dived into virtual reality with enthusiasm; he was the kind of person who basically looked at everything with curiosity. He also attached importance to logotherapy moving with the times and not standing still," say Katharina Ratheiser and Alex Vesely

from digital media support. Both are also active at the Viktor Frankl Institute and have a strong personal connection: They are grandchildren of Viktor Frankl.

In the project, a human-centred design approach was applied, which takes the future users along as experts in their own lives and learns from them. Therefore, in the sense of co-creation, they were actively and creatively involved in the design and research processes right from the start. Their continuous feedback was not only valuable for the success of the project, but played a significant role. In addition, the entire process was accompanied by an empirical study.

The results: three prototypes and high acceptance for VR training

Three prototypes were developed in the course of the project:

1. A VR escape room dealing with guilt (feelings) in the context of a car accident.
2. A 360-degree video embedded in VR that deals with the topic of job loss.
3. A virtual reflection room ("room of possibilities") in which the test persons could deal with their experiences in the other two prototypes (hospital visit after causing a car accident or experience of job loss).

The test persons reported a very different quality of perception, depending on the technology used. The 360-degree videos allow for a very relaxed, passive consumption of the content and are very well suited for conveying training content. In VR training, a slight distraction by the technology was observed, especially during the first use. However, this effect diminished with further use. Then the advantages of the technology became more apparent.

The VR prototypes offer an extended dimension for interpretation and for the inclusion of one's own thoughts and feelings. Especially in the "space of possibilities", where the participants reflected on the situation conveyed in the prototype (feelings of guilt or job loss) and on possible options for action in such a situation, the potential of VR technology to stimulate creativity becomes apparent. Overall, the concept of the reflection room proved to be very suitable for dealing with a situation in the sense of Viktor Frankl's resilience teaching. The scales offered in the reflection room to evaluate the chosen options for action helped the test participants to deal with their choice and the motivation behind it. This was described by most test participants as very helpful and eye-opening. According to the test participants, this effect was reinforced by the three-dimensional, immersive experience in the VR prototype. Overall, the empirical study showed a high acceptance of the VR training among the users.

Plus points and outlook

With regard to the potential of VR training, the flexible applicability (independent of time and place) and the individualisability (e.g. language, content, duration) of the training should be highlighted as the main plus points. "Individualisation can still be supported in the future by developing an AI-based suggestion system," adds AIT researcher Quynh-Huong Nguyen. Based on selected biometric data (e.g. pulse, breathing rate) of the training participants as well as their previous training preferences (e.g. duration, content), VR training units optimally tailored to the users could be offered in the future. "The path from the prototype to psychotherapy practice is now the next logical step," Nguyen emphasises.

More Information

[AIT Austrian Institute of Technology](#)
[AIT Center for Technology Experience](#)
[Viktor Frankl Institute](#)

Press Contact:

Mag. Dr. Christine Wahlmüller-Schiller
Marketing and Communications
AIT Austrian Institute of Technology
Center for Technology Experience
M +43 664 88390690
christine.wahlmueller-schiller@ait.ac.at | www.ait.ac.at

Daniel Pepl, MAS MBA
Corporate and Marketing Communications
AIT Austrian Institute of Technology
T +43 (0)50550-4040
daniel.pepl@ait.ac.at | www.ait.ac.at